

THEMATIC PAPER ONE

A THEMATIC STUDY OF THE NINETEENTH CENTURY DEFENCES



Dawes Battery and Fort Macquarie, from Drawings in Sydney, c.1840-1850, State Library of NSW

**Prepared by the Federation of Australian Historical Societies  
for the Australian Heritage Council  
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**AUSTRALIAN  
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The significance of Australia's coastal fortifications lies only partly in the fortifications that were built and the extant remnant built heritage sites. At least as important is what the sites represent about Australian cultural history – the strong sense of isolation and external threat that has been an embedded part of the Australian psyche, how Australians have viewed themselves and how they have seen Australia in relation to the wider world.

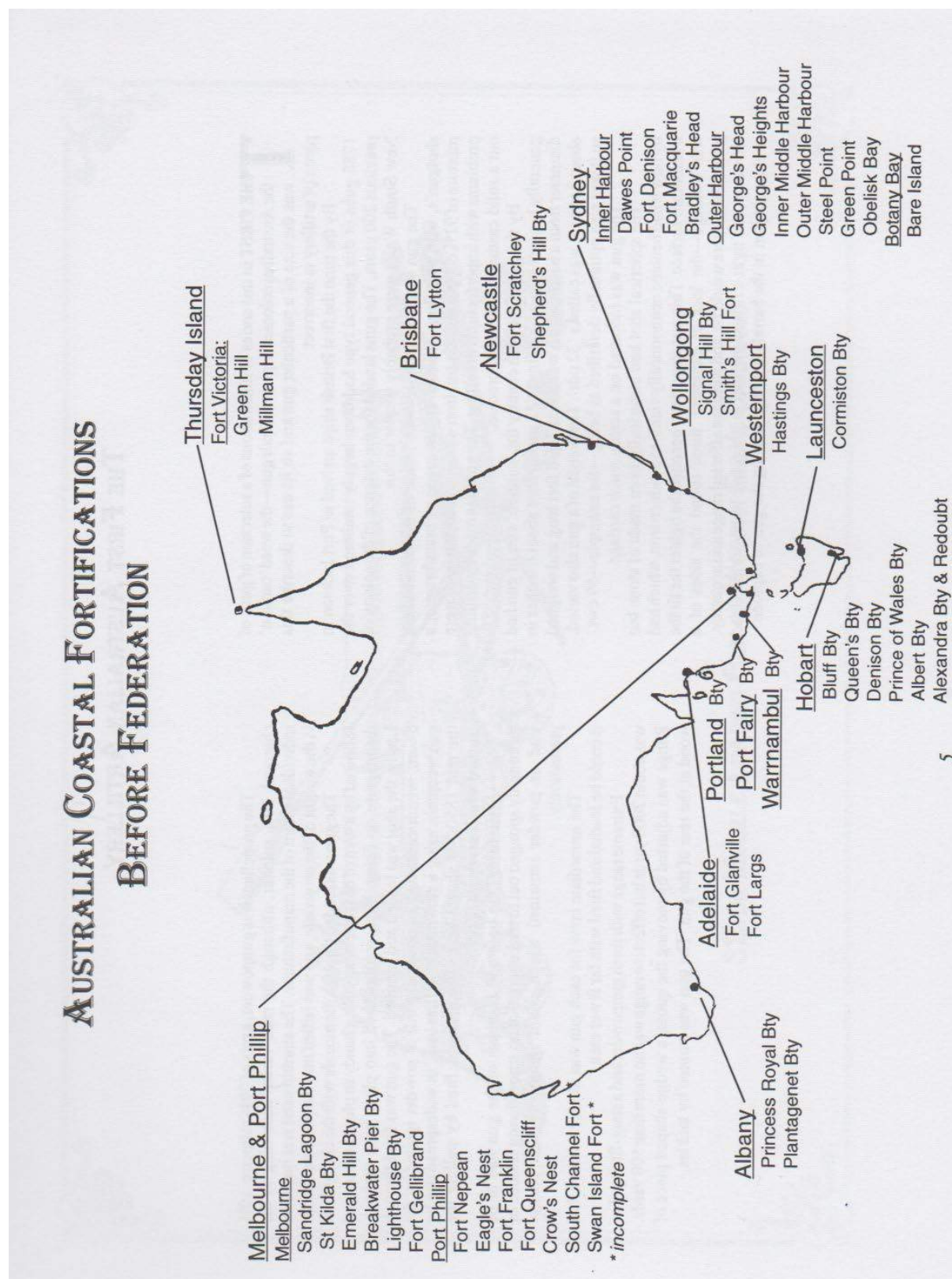
## **ACKNOWLEDGEMENTS**

The Federation of Australian Historical Societies is grateful that then Minister for the Environment, Hon Josh Frydenberg, and his Department, who in 2018 awarded a Protection of National Heritage Grant to undertake two thematic papers on Australian coastal fortifications, for the advice of the Australian Heritage Council.

The production of these two papers has been a team effort. The FAHS has been fortunate to be able to call upon the expertise of a number of heritage professionals and fortification specialists who have donated their services to produce articles about the specific sites under study. I am delighted to acknowledge and thanks (in alphabetical order): Anna Claydon, Denis Gojak, Gordon Grimwade, Kevin Jones, David Lawrence, Elizabeth O'Callaghan, Keith Quinton, Brian Rough, Iain Stuart, Andrew Sutherland, Marten Syme and Patrick Wilson.

I particularly thank the FAHS Executive Officer, John Davies, for his patient work in the formatting and presentation of the papers and Iain Stuart who drew some of the maps.

Don Garden



Source: Bob Nicholls, *Colonial Guns: artillery of the Australian colonies*, Australian Military Forces Publications, 1998, p. 5

## **PROJECT DESCRIPTION**

The Federation of Australian Historical Societies was commissioned under a Protection of National Heritage Grant to undertake two thematic papers on Australian coastal fortifications, for the advice of the Australian Heritage Council. These are:

- i. A thematic study of the early defence of Australia, i.e. nineteenth century east coast  
and
- ii. A thematic study of the significance of the defence fortifications and installations of Sydney Harbour and Port Phillip Bay.

### **Thematic Study One**

The PNHS commissioning document for Thematic Study One specified a study of the fortifications of the east coast of the continent in the nineteenth century. However, the study soon made clear that because of common themes and issues, it was more appropriate to include sites in Tasmania, South Australia and Western Australia. Leaving aside the defence sites in Port Phillip and Port Jackson that are the subject of Thematic Study Two, eleven sites were identified and the first paper includes histories and assessments of these.

One site, Albany/King George Sound/Princess Royal Harbour, is considered of sufficient national significance that it is recommended for assessment for its own National Heritage Listing.

Thematic Study One therefore consists of six thematic/chronological chapters to 1900, followed by individual outlines of the eleven sites considered sufficiently significant for detailed description. Each of these already has a heritage registration as part of the Commonwealth Heritage List or a State heritage assessment. Relevant parts of these are included.

There is a clear case for making these a group listing on the National Heritage List, and if legislation is passed to enable such serial listing, this should be examined. In the meantime, there is discussion among some of the experts in this field about nominating them as a World Heritage Group.

## Thematic Study Two

Thematic Study Two contains studies of the groupings of sites established to defend Port Jackson and Port Phillip. Most of these are gathered near the Heads of the two harbours and were developed in the last two decades of the nineteenth century into integrated and sophisticated defence complexes.

The study soon made clear that this paper should not be limited to nineteenth century sites, or those adjacent to the Heads. Until the 1870s, most of the fortification were further into the Ports, close to the capital cities. As a result, the study has chosen one of the most significant of these in each harbour and has included them in the assessment and the recommendations.

It is also became apparent a study of the Heads fortifications should not be limited to the nineteenth century. Both regions were further fortified in the twentieth century, partly in WWI but most especially in WWII. Therefore Thematic Study Two contains thematic/chronological chapters for the period 1901 to 1946, and detailed studies of one site each in each harbour that represent twentieth century developments – North Head and Point Lonsdale.

Some of the sites, two in Port Phillip (HMVS *Cerberus* and Point Nepean) and one in Port Jackson (North Head), already have National Heritage Listing, and all the others have Commonwealth Heritage Listing and/or State heritage listing. It is proposed that these sites should be incorporated in the following group listings.

Thematic Study Two proposes group listings for the Port Jackson (and Bare Island) Defence Group and the Port Phillip Defence Group.

## RECOMMENDATIONS

### Recommendation One

That Albany/King George Sound/Princess Royal Harbour be considered and assessed for the National Heritage List.

### Recommendation Two

That if the issue of serial listing can be overcome, consideration should be given to National Heritage Listing of the ring of nineteenth fortifications around the Australian coast, as well as the other recommendations in this study for King George Sound, Port Phillip and Port Jackson. To include the fortifications at the following sites – Adelaide, Brisbane, Hobart, Newcastle, Port Fairy, Portland, Thursday Island, Townsville, Warrnambool and Wollongong.

### Recommendation Three

That the **Port Jackson (and Bare Island) Defence Group** should be considered for the National Heritage List, consisting of:

Fort Denison

Middle Head and Georges Head sites

South Head sites

Bradleys Head sites

Bare Island (Botany Bay)

North Head (already on the National Heritage List, but it fits into the themes and history of this group.)

### Recommendation Four

That the **Port Phillip Defence Group** should be considered for the National Heritage List, consisting of:

Fort Gellibrand, Williamstown

Fort Queenscliff

HMVS *Cerberus* (already on the National Heritage List, but is an essential component of the themes and history of this group.)

South Channel Fort

Swan Island Fort



Point Lonsdale Defence and Mercantile Navigation sites

Point Nepean Forts (already on the National Heritage List, but is an essential component of the themes and history of this group.)

## **PART ONE - THE FRIGHTENED COUNTRY OR THE INVASION MENTALITY**

### **CHAPTER ONE INTRODUCTION AND BROAD CONTEXT**

Modern Australia is one of the few nations that is surrounded by oceans and has no land borders with another country. Unique in occupying a whole continent, as well as many islands, it has an extraordinarily long coastline of perhaps about 60,000 kilometres, although estimates vary according to the criteria used. Before air flight changed human travel and the nature of modern military defences, such a coastline offered almost unlimited opportunities for seaborne landing and invasion.

Australia's Indigenous people occupied the land for more than 60,000 years and those who inhabited northern coastal regions had some continuing contact with peoples who sailed to the Australian coast from the islands to the north. These appear to have been essentially amicable exchanges that involved some trade, and there is no evidence of attempted occupation by the visitors. Otherwise, the Aborigines had remained isolated for millennia from external contacts until European explorers began to touch on the coast in the seventeenth century. From the late eighteenth century the Aborigines found that invasion and settlement were all too easy for a powerful country with the capacity to cross the seas, to establish themselves in desirable sites and by violence and dispossession to occupy the land.

Following the establishment of a convict settlement at Sydney Cove in January 1788, the British gradually claimed the whole continent from the Aborigines and then occupied it and the island of Tasmania, establishing six colonies, each with its main capital town/city as well as other coastal communities. During the nineteenth century the colonies developed successful and even prosperous societies. Ironically, this success contributed to a sense of the colonists' own vulnerability, a fear that they in turn might be invaded and displaced as they had done to the Aborigines.

This sense of isolation and fear of the external 'other' is one of the principal cultural themes in the nineteenth century, and manifested itself in a number of forms. One was a sense of tension and fear

about perceived vulnerability to external attack by one of Britain's enemies. Robert Hyslop counted more than 200 of what he called 'war scares' in Australia in the nineteenth century.<sup>1</sup> A second manifestation of this cultural theme was the ring of fixed fortifications that was constructed around the coastline, principally in the last three decades of the nineteenth century. Until the 1870s all fortification were sited to defend the capital cities, but late in the century others were established at potentially vulnerable points in Victoria, Queensland, NSW and WA. Construction ebbed and flowed according to the temperature of international affairs and available funding, but the result was the construction of a scattering of thirteen fortified regions by the late nineteenth century, especially around the entrances to Port Jackson and Port Phillip. While other colonies acquired small naval vessels, Victoria developed its own relatively powerful and modern navy, the largest in the Empire outside the Royal Navy.

In the twentieth century, notably during WWII, several new fixed coastal defence sites were established and there were major expansions and developments of existing ones, especially in Port Jackson and Port Phillip.

Although defence issues and colonial fortifications played such an important role in colonial societies, the coastal fortifications are little recognised in the National Heritage List. However, several are on the Commonwealth Heritage List and most are well recorded in state heritage registers. In the NHL there are only two essentially military-listed sites, both in Victoria, HMVS *Cerberus* and Point Nepean. North Head in Sydney Harbour is listed but mainly for its role as a quarantine station, and not for its minor military involvement in the nineteenth century that was more significantly developed in the twentieth century. There are a few defence-related twentieth century sites on the NHL (eg Point Cook airbase, HMAS *Sydney* and the Australian War Memorial) but the coverage is not comprehensive.

## **NATIONAL HERITAGE LISTED SITES – MILITARY AND COMMEMORATION SITES**

Australian War Memorial

HMAS *Sydney* II and HSK *Kormoran*

HMVS *Cerberus*

Myall Creek Massacre and Memorial Sites

North Head Sydney

Point Cook Air Base

Point Nepean Defence Sites and Quarantine Station Area

## **COMMONWEALTH HERITAGE LISTED SITES**

There are many defence sites on the Commonwealth Heritage List from both the nineteenth and twentieth centuries, although a substantial proportion of these are individual buildings or small sites and very few by themselves would have any likely claim to national significance. However, some form parts of groups that are situated at major fortification complexes and will be encompassed by this study and will be proposed for group listing.

Commonwealth Heritage Listed Sites that are relevant to this study include:

### **New South Wales**

Admiralty House and Garden Fortifications

Middle Head – there are several CHL sites including: Batteries A83 and C98A; Battery 42; Battery for Five Guns; Chowder Bay Barracks Group; and Defence sites at Georges Heights and Middle Head.

### **Victoria**

Swan Island Defence Precinct

Fort Queenscliff

Point Gellibrand

### **Queensland**

Green Hill Fort, Thursday Island

### **Tasmania**

Anglesea Barracks, Battery Point

Many of the other nineteenth century fortification sites are now under the control of state and local government authorities, and a high proportion have state heritage listing. These include places such as:

NSW - Fort Denison and Middle Head in Sydney Harbour and Bare Island in Botany Bay.

Victoria – Fort Gellibrand (Williamstown), Point Lonsdale/Shortlands Bluff and the South Channel Fort.

## **THE BROAD CONTEXT**

Isolation and vulnerability were major themes in the history of the Australian colonies in the nineteenth century, and in the second half of the century gradually resulted in the establishment of a range of increasingly sophisticated defence constructions and military organisations.

The colonists' perception was that as European outposts rich in resources, sparse of population and far from the protection of mother Britain, they were a tempting acquisition for foreign powers or armed raiders. Imperial expansions by European nations during the century, especially after 1870, stoked their fears. Exaggerated as this might seem in hindsight, since the feared invasions did not occur, the concerns were nevertheless very real.

The nineteenth century was a turbulent period in Europe and although Britain was not always deeply involved in the international tensions, as the most powerful nation the British were at least on the edge of most conflicts. The century began with the ongoing repercussions from the French Revolution, notably the Napoleonic Wars until 1815 in which Britain was a major protagonist. Britain was concurrently at war with the United States 1812-1815 and there was tension between those two nations, on and off, over a substantial part of the century, notably during the American Civil War 1861-65. Britain escaped the revolutions of 1830 and 1848 that caused turmoil in many parts of Europe, but the Empire was in some form of conflict at most times during Queen Victoria's reign from 1837. Most of these were small, localised incidents and attacks. Britain was involved in only one major international war, the Crimean War of 1853-56, with France against Russia.

An element in the turbulent relations in Europe, especially in the later decades, was the great colonial expansion as the European powers set out to take over as much of the planet not already under European control as they could. As competition grew, Britain was in a frequent state of

tension as the imperial nations brushed up against each other in their rivalry for territory: notably Russia in the northern sub-continent and Afghanistan; Germany and France in the Pacific and Africa; and the United States in the Pacific. The growing power of the newly-united Germany in the late decades of the century and its expansion in Pacific, caused particular concern in the eastern Australian colonies who applied much pressure on the British to claim the region as their own.

In those same late nineteenth decades, the emergence of Japan as an international power and growing instability in China caused Australian eyes to turn with mounting anxiety towards the Asian peoples to their north. There had been resistance to Chinese and other 'coloured' migration since the 1850s, but by the turn of the twentieth century the fear of the 'Yellow Peril' and the 'hordes' of Asian people had become profoundly embedded in the Australian psyche. All this enhanced the perceived need to cling to Mother Britain for protection, as well as to build fortifications to hold off any attempted military invasion.

Most of Britain's nineteenth century 'wars' involved resistance from Indigenous peoples to colonisation - Australian Aborigines, Maoris, Chinese Opium Wars, the Indian Mutiny, Zulus, Sudan, Boxer Rebellion, etc. The Boer War at the end of the century was fought against European colonists in South Africa, but it was one in which the Australian colonists believed they should be involved in defence of the Empire – as they also did in the Sudan War and in the Boxer Rebellion. Such involvements, and those to follow in the first half of the twentieth century, were motivated by a mixture of British identity and patriotism as well as concern about their own security and a need for insurance and assurance from a powerful ally. (These continued in the twentieth century as common motivations in Australia's many military involvements.)

In this environment, to many colonists it seemed almost inevitable that one day a privateer from, or the warships of, one of Britain's enemies would steam across the horizon into Australian colonial harbours, bombard the cities, hold them to ransom or even land an invading force. In Melbourne and Sydney, for example, during the 1850s gold rushes there was considerable fear that the wealth of gold in the colonies might tempt a foreign power send an armed vessel or fleet into the harbours to hold the cities to ransom for their gold. These fears were heightened during the Crimean War in 1853-56 when Britain was at war with Russia.<sup>2</sup>

In periods when there was higher international tension, colonial stress levels rose markedly and generated discussion and reports about the need for fortifications that at times resulted in action. Nevertheless, the level of effective action was far less than the fear of invasion might suggest. As Dean Boyce has commented with regard to Port Jackson, but in terms that apply equally to Port Phillip and other sites around the coast:

Political indecision interspersed with bouts of rushed planning led too often to incompetent—at times criminally negligent—construction. For long periods Sydney's forts were inadequately manned and carelessly maintained, the weapons acquired sometimes obsolete before they were even mounted, and some fixed batteries were so poorly sited that they could easily be overrun by an enemy and be turned back on the city. With the harbour defences continually subject to technological obsolescence, and large amounts of defence money spent to little avail, Sydney's citizens fretted throughout the nineteenth century over their continuing state of defencelessness.<sup>3</sup>

Action on defence fortifications can be characterised as occurring in four periods, each of which will be the subject of a separate chapter in this report, following a brief outline of military technological evolution during the century.

## **CHAPTER TWO**

### **NINETEENTH CENTURY CHANGES IN THE TECHNOLOGY OF GUNS AND FORTIFICATIONS**

None of the colonial fortifications ever faced an enemy and no colonial gun battery ever fired a shot in anger during the nineteenth century.

At the beginning of the century the principal artillery armaments were bronze, smooth-bore muzzle-loading cannons that fired a solid projectile – a cannon ball. Such guns had a limited range, but when grouped in numbers on a battle field or warship could do much damage at relatively close quarters. They were of limited value as land-based defences against armed ships because of their short range and questionable accuracy. The first generations of colonial shore defences prior to the 1850s consisted of small groups of these cannons, situated in close proximity to the main towns of Sydney and Hobart because they were unsuited to defending wider harbour entrances. The cannons were mainly placed on simple firing platforms, although in a few more sophisticated cases they had a rampart built around them to protect them from gunfire.

As the century advanced, major technological innovations transformed the nature of warfare in general and coastal defences in particular. Critically, from early in the century rifled-bored cannons that span the projectile to gave greater accuracy and distance than earlier smooth-bored types were developed. Some older cannons were rebored, but there were new generations of rifled-bored barrels made of steel as cannons evolved into artillery. The slow adoption of breech-loading rather than muzzle-loading guns enabled more rapid fire, although technical problems with early models meant that they were not widely adopted until the 1880s. The evolution of projectiles was, put simply, from solid cannon balls to primitive explosive projectiles like those used in the American Civil War in the 1860s, and then to explosive bullet-shaped armour piercing shells from the 1870s and high explosive artillery shells from the 1880s.<sup>4</sup>

The adoption of many of these innovations in the colonies was slow, partly because the technology was changing so quickly that many technological advances were already superseded before reluctant governments had spent the money. This applied equally to the design of defensive fortifications which were in constant need of change to house new artillery and to provide better protection from more sophisticated enemy shipboard weapons. The positioning of fortifications also changed as guns were able or needed to cover longer defensive ranges. Notably, extended distances



and greater accuracy meant that fortifications could be sited much further away from population centres, at places where they were better able to prevent the approach of enemy ships rather than just fend them off once they were close by. In the case of Port Jackson and Port Phillip, this resulted in increasing concentration of fortifications around the harbour entrances to prevent the entry of hostile vessels, which made the earlier generation of batteries close to the cities obsolete. The new generation of guns also made feasible the construction of coastal fortifications at several other sites around the Australian coastline that were considered vulnerable to foreign intrusion.

The design and construction of naval vessels was also evolving to reflect new on-water and coastal defence technologies. A turning point in the development of ship-and shore-based armaments was a battle during the American Civil War in March 1862 between the USS *Monitor* and CSS *Virginia* off Virginia. The *Monitor* was a newly-developed iron-hulled ship that sat low in the water and was notable for having a revolving gun turret rather than canons firing through gun ports. The *Virginia* was iron-clad and although it still used canon portholes it was designed with a very low profile above the waterline which made it a difficult target. They fought a long battle at close range without effectively damaging each other, thereby demonstrating the defensive superiority of their construction. Although they were slow and difficult to manoeuvre because of their weight, they had demonstrated that wooden ships had less future in naval battles. Other powers, including Britain, soon began to build such vessels, and within a few years, the Victorian government also acquired a monitor-class vessel, HMVS *Cerberus*.<sup>5</sup> However, it would be several more years before sail was entirely superseded and all ships were built of iron or steel.

Nevertheless, the new generation of vessels changed the nature of land-based fortifications which now needed much more accurate guns that could fire armour-piercing (and ultimately explosive) projectiles. In turn, the fortifications were themselves more vulnerable to gunfire and were increasingly designed to provide better protection from the guns of such vessels. They were concealed behind less obvious parapets, or even camouflaged, and as far as possible were kept out of sight. The late-century hydro-pneumatic or so-called disappearing gun carriages that were acquired for Port Phillip, Port Jackson and a number of other fixed defence sites are a prime example. They were hidden in a low circular emplacements and were visible for only 20-30 seconds, just long enough to fire before recoil caused them to disappear again. A relatively slow rate of fire and initial teething problems - mostly hydraulic failure - initially gave them a poor reputation.<sup>6</sup> However, the guns eventually proved to be effective and extremely accurate weapons,

although never used in conflict. Another trend was greater dispersion of guns, mounting them singly or in pairs rather than in clusters, which made them less vulnerable and demanded much more accuracy from enemy guns.

The adoption of these new technologies of war was complemented by several other innovations in what were increasingly sophisticated and integrated systems of defence. Telegraph and railways had already sped up communications and the movement of troops and artillery, and these were implemented in the colonial fortifications and defence schemes. Later in the century, sophisticated range finders improved gun accuracy, and telephone lines enabled immediate communication and better coordination between control bases and firing positions.

In the last two decades of the century as ships became faster attention was turned to other ways to slow down or damage them so that land-based guns could fire upon them. Since the 1850s there had been experiments with various types of 'torpedoes' and in the last two decades these were adopted as a major element in coastal defence systems. At first the name was given to stationary mines that could be placed across passages to restrict or prevent the entry of ships, and were variously fired by timed fuse, electricity or impact. Subsequently the term was used for explosive devices that were mounted on a long spar projecting from the front of a small vessel and ignited when in close proximity to the enemy – not without danger to the torpedo boat. Finally came fish torpedoes using compressed air for propulsion, such as the Brennan and Whitehead torpedoes, which were more like the powered projectiles that we know today. They were either fired from a shore launching base or from mobile torpedo boats that could manoeuvre into a position from which to fire at hostile vessels. Electricity also played other roles in harbour defences, including the earliest generation of searchlights for night-time defence.<sup>7</sup>

However, the difficulty of evaluating rapidly evolving technological developments after 1860 inhibited speedy adoption in the Australian colonies. There was a reasonably well-grounded concern that by the time armaments had been acquired at great expense and after long delays from Britain, they would already be obsolete, so it was wise to wait to see what came next. This resulted in disjointed and erratic planning – a great deal of dithering and indecision about what to do and avoidance of cost, interspersed with spurts of activity followed by decline and decay.<sup>8</sup>

As is discussed in the following chapters, three British military engineers played major roles in the advising on the armaments and design of the fixed defences and the wider colonial defence forces. At first in the 1860s, (later Major General Sir) Peter Scratchley, and then in the late 1870s in conjunction with General Sir William Jervois, he had more influence than any other individual in designing colonial defences and fortifications. His recommendations, together with Jervois in the late 1870s, resulted in a substantial expansion and building programme through the first half of the 1880s. In 1889 Major General Edwards was employed to review colonial defences and he issued a warning about their disunited state that spurred defence construction and sped up moves towards federation of the colonies. He also perceptively pointed to the changing character of military technology, particularly its mobility, that was reducing the likely future significance of small numbers of fixed coastal fortifications.

## **CHAPTER THREE**

### **1788 to 1850**

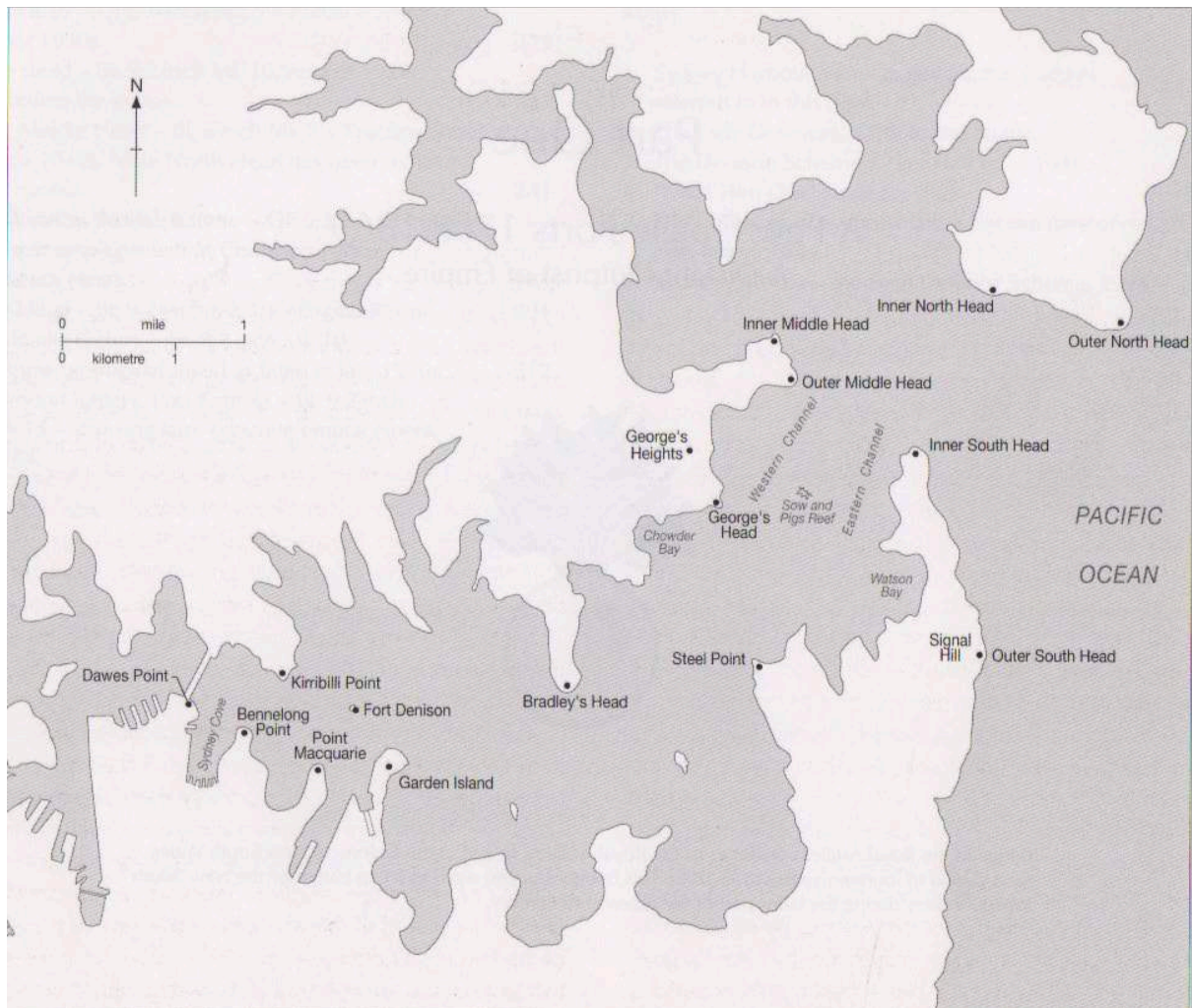
Prior to 1850 there were only relatively token defences at the emerging six colonial capital towns, and the only batteries or fortifications were in Port Jackson (Sydney Harbour), largely around Sydney Cove near to the town, and on the Derwent River close to Hobart. Each of the main coastal settlements had small British garrisons, marines until 1791 and then army units, but in the early years their presence was as much to control convicts and to 'protect' colonists from feared Aboriginal attacks as from potential invaders. Royal Navy vessels provided further protection, but mainly through irregular visits.

Until the 1820s there was an undercurrent of concern about France, but it just as likely to be fear that the French might claim part of the continent as to commit acts of war, even during the Napoleonic Wars. The visit by Baudin to Sydney in 1802 provoked consternation that the French might be planning to settle in Bass Strait, from where they could threaten British shipping. One result was the short-lived settlement at Sorrento in Port Phillip in 1802-03 which subsequently moved to Hobart. In the mid-1820s concern about renewed French interest contributed to the decision to found settlements at Albany (Western Australia), Western Port (Victoria) and Raffles Bay (Northern Territory). An equally important element in the founding of Albany was to evaluate it as a new NSW penal outpost. Albany was the only one of these 1820s settlements to survive and in later decades would become one of the most significant strategic and symbolic military sites on the Australian continent.

### **SYDNEY**

The topography of Port Jackson was something of a mixed blessing when it came to defence from hostile vessels. On the one hand, the two kilometres entrance width between South and North Heads was beyond the effective range and accuracy of most cannons in the early decades of the century. As better guns were developed it was not an impossible distance to cover, especially if they were rifle-bored. Within the harbour, opposite the entrance, is a broad stretch of headland, Middle Head. At the northern tip is Georges Head, the site of the earliest battery near the entrance, while parts of Middle Head further south would also be fortified in later years. Further into the harbour a long peninsula, Bradleys Head, juts southward and creates a narrower channel that was a natural

site for fortification. Closer to the city there are two islands, Garden Island and Pinchgut (later Fort Denison) sitting near the entrance to Sydney Cove. These all provided good places on which to mount batteries.



The main military and fortification sites in Port Jackson in the nineteenth century. Source: Peter Oppenheim, *The Fragile Forts: The fixed defences of Sydney Harbour 1788-1963*, Canberra, 2004

On the other hand, the complex topography of Port Jackson meant that most headland sites were difficult to access and service by land and were expensive to maintain, especially as they should ideally have a contingent of trained artillery men permanently stationed. South Head was relatively accessible overland and was used from the 1790s as a signal station for shipping. Governor Macquarie had a military road built there in 1813 and in 1818 the Macquarie Lighthouse was constructed. However, in the early decades most defences were established close to the growing town for cost and convenience reasons as well as the limitations of the guns that were available.

The foundation of the penal settlement in Sydney Cove in 1788 was almost immediately followed by the first fortification, completed in November. It was a redoubt, little more than an earth platform within the settlement near later Macquarie Place, on which were mounted two six-pounder guns. It was not maintained and was removed in 1789. In that year construction commenced at Dawes Point, the later site of the southern end of the Sydney Harbour Bridge, on a powder magazine, followed by another battery, this time with eight six-pounders. During the 1790s more defences were established, largely because of fear of revolutionary France, and by the early nineteenth century there were four batteries, at Dawes Point (West Battery), Bennelong Point (East Battery), Windmill Hill (Observatory Hill) and Garden Island. In 1801, the first but ineffectual fortification was built closer to the Harbour entrance, at Georges Head.<sup>9</sup>

Despite fear of French hostilities during the Napoleonic Wars to 1815, these fortifications were allowed to fall into disrepair, and even heightened concern when Britain was at war with the United States in 1812-15 had little effect. That is indicative of an ongoing issue. How seriously the fortifications were maintained and equipped ebbed and flowed according to the level of perceived threat or some other enthusiasm, and because of arguments about the cost and best design. For most of the time the fixed defences were unmanned and in disrepair. That, indeed, might be an appropriate epitaph for Australian colonial defences for most of the first six decades of the century.

Recent research has shown that in the early decades of the century the French, Spanish, American and Russian military each considered attacking and capturing Sydney, and even drew up contingency plans, but the changing international situation and the logistical challenges meant that nothing came of them.<sup>10</sup> Fortunately, the people of Sydney knew nothing of these as it would have heightened their sense of vulnerability.

Following the end of the war with France, there was only minor further fortification. Windmill Hill was renamed Fort Phillip but was then abandoned. East Battery on Bennelong Point was reconstructed as Fort Macquarie between 1817 and 1821 in a style that led to its contemptuous dismissal as a 'gingerbread fort'. A battery was recommended at South Head in 1820, but its fortification was not begun until 1841 and was not completed by 1851, and there were no guns until 1871. From 1821 the Royal Navy ostensibly maintained vessels in colonial waters, based in Sydney, but their protective umbrella was limited because there were too few ships and their visits infrequent.

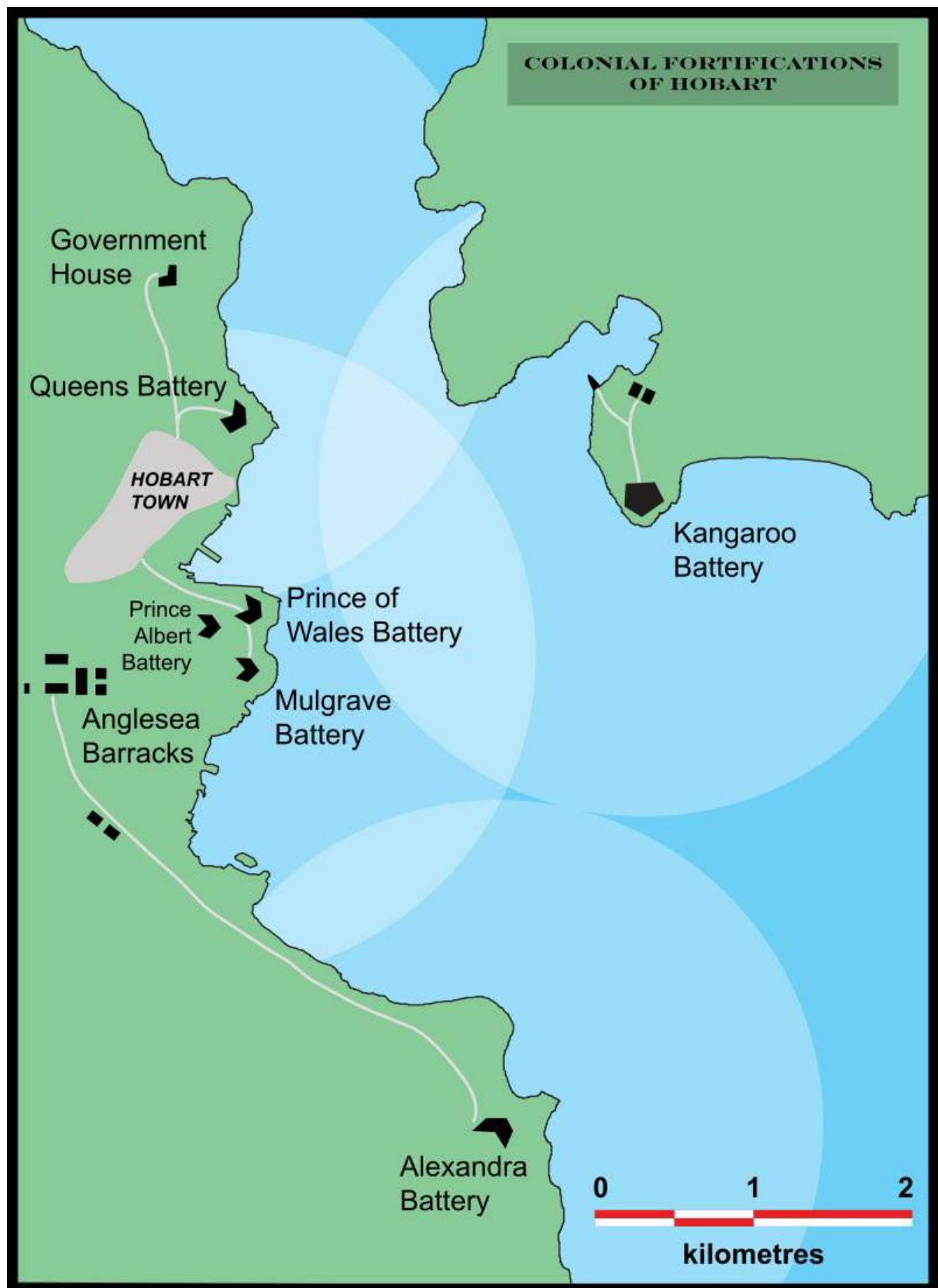
This reflected British government reluctance to spend money on such a remote and relatively secure outpost. As part of J.T. Bigge's assessment of the colony and the transportation system (1819-23), a report was made on its defences by Majors James Taylor and Thomas Bell. It was concluded that the colony was not 'of sufficient consequence to repay the expenses which any Enemy would incur in fitting out an Expedition', and it did not offer enough potential plunder to induce privateers or pirates to attack.<sup>11</sup>

Periodic visits by Russian, United States and other foreign naval and commercial vessels in the 1820s and 1830s heightened a sense of vulnerability, especially an alarming event in late 1838 when three American naval ships entered Port Jackson overnight, unseen, and were discovered in the morning anchored in Sydney Cove.<sup>12</sup> In 1840 construction began on defence works at Bradleys Head and Pinchgut (Fort Denison) but work on the latter was abandoned when the British government refused finance and it was not continued until 1854. The Bradleys Head battery had six guns mounted on it with a potential range of 1750 metres, but it was not well maintained and offered little real protection.

The number of guns and positions ebbed and flowed. In 1842 there were more than 60 guns in Port Jackson at sites including Georges Head, Bradleys Head, Pinchgut and Fort Macquarie.<sup>13</sup> In all likelihood, most were scarcely serviceable. In the early 1850s Port Jackson's defences were said to consist of batteries at Dawes Battery, Fort Macquarie and Fort Phillip, each of which had 6 guns.<sup>14</sup> By then the British government was increasingly pressing the colonial governments to pay a share of the cost of their own defence, an idea about which they were not enthusiastic.

## **HOBART**

Settlement began in Tasmania (Van Diemens Land) at Risdon Cove on the Derwent River in 1803, but the camp was moved down river to Sullivans Cove, the current site of Hobart, in 1804. One advantage of the site was that to south (Battery Point) and to the north there was higher ground suitable to site protective fortifications. An earthwork redoubt with two ship's cannons was almost immediately constructed near the cove. However, as Van Diemens Land was a poor, convict colony,



during the following decades it was not seen as a significant prize for any invader and further fortifications around Hobart were only slowly developed, of poor quality and for much of the time scarcely serviceable.



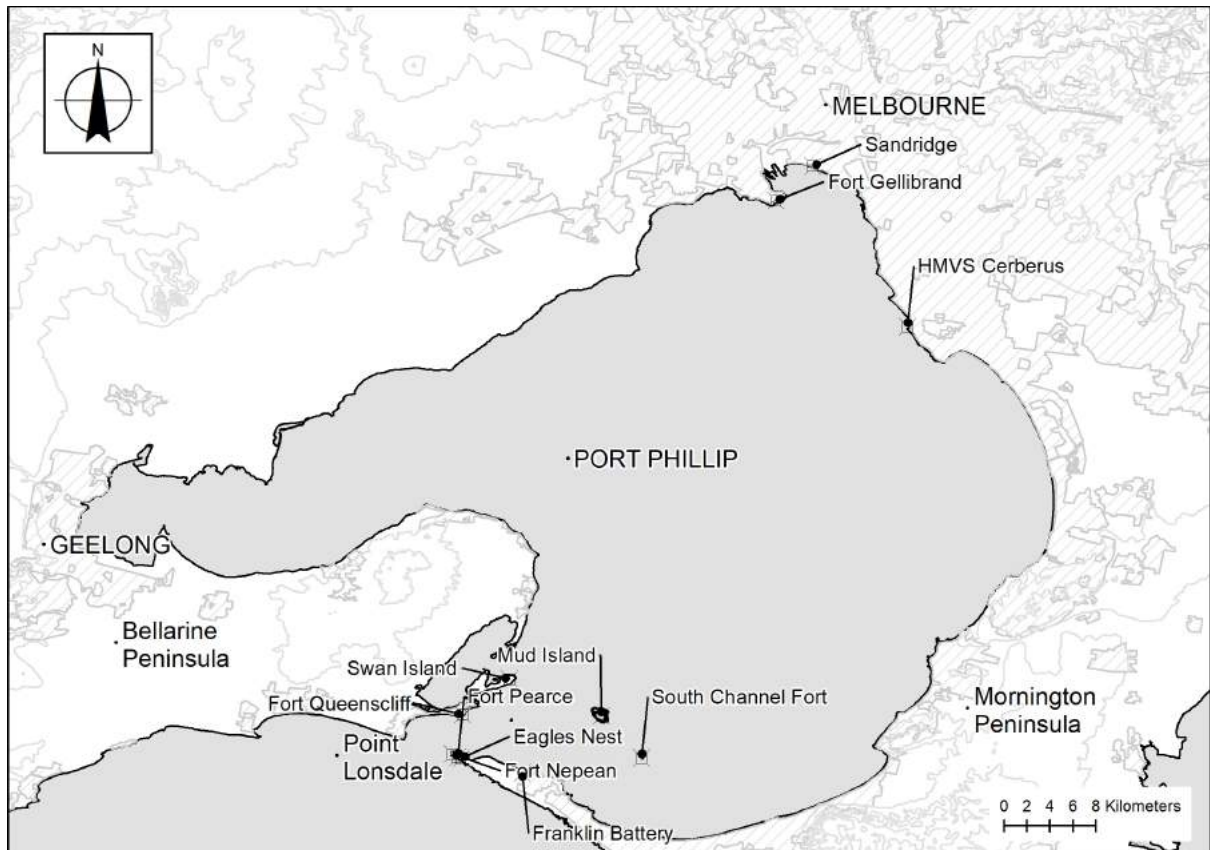
When Governor Macquarie visited in 1811 he ordered the building of Anglesea Barracks at Battery Point to house the military, and a more permanent fortification that was constructed with six guns at the eastern end of Battery Point (Mulgrave Battery) on the southern entrance to Sullivans Cove. Thereafter there was little change before the late 1830s when work commenced on the Queens Battery on the northern side of Sullivans Cove, although it was not fully developed. In the early 1840s the Prince of Wales Battery was constructed on another site on Battery Point, with ten 8-inch cannons.<sup>15</sup>

## **OTHER COLONIES**

By 1850 colonial settlement had begun in each of the future Australian states. Privately-promoted colonies had been established in Western Australia on the Swan River at Perth, and in South Australia where Adelaide had been set out beside the Torrens River. Both towns were sited inland from their ports (Fremantle and Port Adelaide) and neither was defended by a fortification. A penal settlement in Moreton Bay in later Queensland was followed by the establishment a few kilometres upstream on the Brisbane River of the town of Brisbane. It was in its infancy and effectively unguarded apart from a small contingent of British troops.

Meanwhile, the spread of the wool industry from Van Diemen's Land and New South Wales had led to the opening up to colonisation of the Port Phillip District in the mid-1830s. In 1851 it was separated as the Colony of Victoria. The centre of the settlement was established on Port Phillip which, like Port Jackson, would in future decades become the harbour for one of Australia's two greatest cities and therefore the site of major fortifications. However, the topography and the siting of the cities are very different. Where Port Jackson is a complex of inlets and rocky headlands, Port Phillip is a wide, open bay with no secure supply of fresh water close to its mainly sandy shores. As a result the capital, Melbourne, was established where there was potable water about six kilometres upstream on the Yarra River, at the northern end of Port Phillip. Initially the Yarra was the main port, but as larger ships could not navigate upstream a sea port was established at Sandridge (later Port Melbourne) on Hobsons Bay near the Yarra mouth. No fortifications were established prior to 1851 and only a small contingent of British troops, the first thirty of whom were sent in 1836, provided military protection.

Much was to change in the next decade.



Port Phillip showing the main nineteenth century military and fortification sites. The protective cluster at the Heads is very apparent. Drawn by Iain Stuart.

## CHAPTER FOUR

### 1851-1870

The rapid increase in the wealth and population of Victoria and New South Wales during the 1850s gold rushes, to a lesser extent shared by the other colonies, promoted new demands for appropriate defences. With great wealth pouring through the ports, it was widely believed that the temptation might be too great for a hostile power that could send an armed vessel to hold the cities to ransom, or a fleet of warships to conquer and colonise. Britain was either at war or in a state of tense relations with other powers, or had other military challenges, throughout much of the 1850s and 1860s (Crimean War, Indian Mutiny and the American Civil War). Hence the threat to colonial security seemed very real – at least to the colonists. However, assistance from the British government was limited as it increasingly adopted a policy of encouraging the colonists to take on more responsibility for their own defence. In 1870 the remaining garrisons were withdrawn from the Australian colonies.

The gold rush period also initiated another theme of fear in the colonies that, while it did not represent an immediate military threat, would become one of the major defence concerns in Australian history – the perceived menace of the millions of Asians to the north. There was a flow of Chinese to the goldfields during the 1850s and, although this was effectively stopped by discriminatory legislation, the colonies and in the twentieth century the federated nation continued to be highly conscious of themselves as a vulnerable European outpost far from British protection. As Japan grew in military power later in the century, and as small numbers of Chinese continued to infiltrate colonial borders, fear of the ‘yellow peril’ manifested as one of the powerful defence motivations and resulted at the start of the twentieth century in the White Australian Policy.

More immediately, in 1853 colonial fears of another infiltration were raised when France annexed New Caledonia, triggering a wave of concern about the likelihood European powers and the United States taking up territory in the Pacific to establish plantations, trade and effective occupation. The era of full colonial takeover in the Pacific would not really start until the 1870s, but the Australian colonists saw the Pacific as properly a British preserve and were alarmed by the possibility of foreign economic and military activity. They maintained pressure on Britain for the rest of the century to annexe as much as it could of the Pacific islands. The French annexation of New Caledonia brought

other fears, too; when it was announced that the acquisition would become a penal settlement, the Australian colonists (perhaps ironically) were outraged at having criminals dumped in their region.

Of greatest concern in the 1850s was the Crimean War of 1853-56 which saw old enemies Britain and France pitted against Russia. This was the era of 'gunboat diplomacy' when a warship or raider could threaten to bombard a city or attack shipping in order to extract a concession or ransom. Throughout much of the century, but particularly during the Crimean War, the colonists lived in a state of uncertainty, not only about what was happening so far away but whether a Russian warship might be creeping up on them. Russian vessels had been periodic unexpected visitors to Sydney in previous decades, and now there was a potential threat that a Russian ship might sail through the undefended heads and appear off Port Melbourne or Sydney Cove.<sup>16</sup> Indeed, this is what happened in January 1862, long after the war ended, when the Russian frigate *Svetlana* visited Melbourne. She arrived unannounced and fired a salute on passing through the Heads but it was not returned because no-one was on duty at the Shortlands Bluff Battery, and there were no gunpowder charges anyway. *Svetlana* also fired a salute at Williamstown, again without response because the guns were dismounted. To compound the situation, another Russian vessel, the *Bogatyr*, visited in 1863 and received the same lack of response.<sup>17</sup> During the Crimean War fear and rumour reached a peak in Melbourne one night early in 1855 when there were rockets and explosions over the Bay. Was a Russian force attacking? It turned out to be a celebratory rocket display from the migrant ship *Great Britain* which was being released from quarantine.

Adding to the sense of isolation, the war caused disruptions and delays in the arrival of news and mail from Britain. These long, slow and virtually sole sources of communication had previously been carried irregularly by sailing vessels heading to the colonies. In 1853 a short-lived bi-monthly mail service using small paddle-driven steamships commenced, from London via the Cape to Melbourne. A coaling depot was established on the south-west corner of the continent in Princess Royal Harbour (King George Sound) at Albany, where vessels were bunkered before and after the long hauls across the Indian Ocean and the Great Australian Bight. Just as the service was starting, the British government contracted for a second bi-monthly service by the P&O company that would branch off an existing Asian route, also via Albany. The first company petered out within a few months, and although P&O successfully established its run it too was closed down in early 1855 because the British government needed ships and coal for war service.

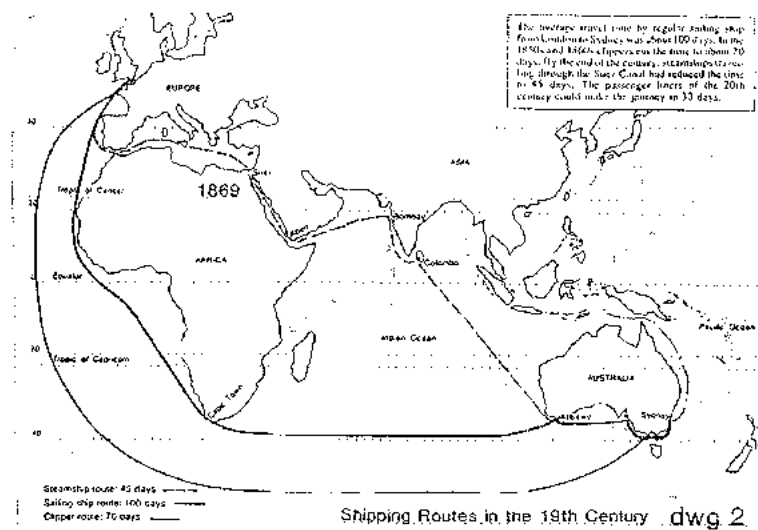


Figure 3. Map showing communication routes between Europe and Australia in the 19th century. Source: Drawing 2 from Proposals for Conservation, Renovation, Development, Albany Barracks and Princess Royal Battery, Australian Coastal Defences, King George Sound WA, Town of Albany, 1986.

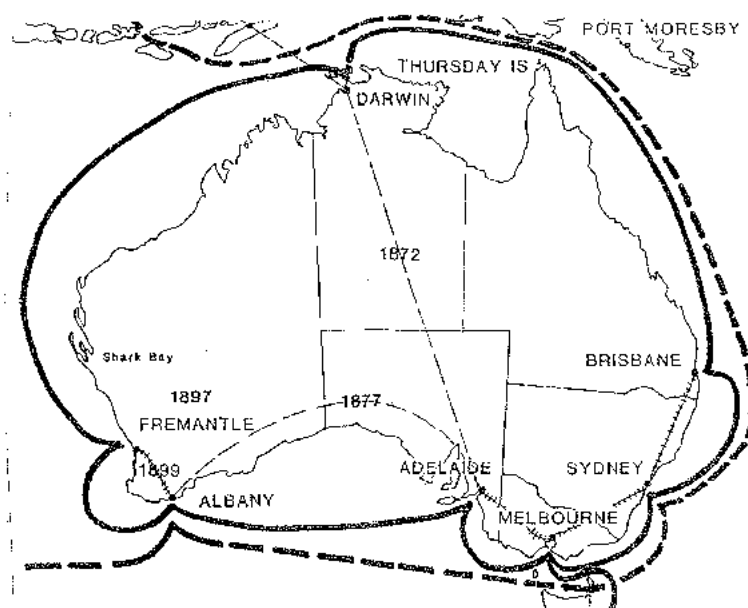


Figure 4. Map showing communication routes around and within Australia in the 19th century. Source: Drawing 3 from Proposals for Conservation, Renovation, Development, Albany Barracks and Princess Royal Battery, Australian Coastal Defences, King George Sound WA, Town of Albany, 1986.

Nineteenth century Australian communication routes, Princess Royal Fort Conservation Plan, 2002.

The sudden cessation of the reliable arrival of mail and news caused considerable alarm and discontent in all the colonies. Even after the conclusion of the war in 1856 it took several months

before the steamer service was recommenced.<sup>18</sup> Thereafter, until the connection of the colonies to Britain by telegraph in 1872, the steamer mails were the main form of communication. Even though arrivals became increasingly reliable and frequent, there was still a delay of weeks in hearing news of British affairs, and the constant fear that war might have broken out without the knowledge of the colonists.

In response to the Crimean War the colonies were stirred into moderate action to improve their defence capacities. New South Wales, Victoria and South Australia each passed legislation to establish volunteer militias, a mixture of rifle, mounted and artillery corps – the last in Sydney with no actual guns. None proved effective as they lacked quality training and were given obsolete armaments, while many volunteers had difficulty obtaining time off work, purchasing their uniforms and maintaining their enthusiasm in the poorly organised forces. The militias each wound down after an initial burst of activity, but in the period from 1858 to 1860 each of the colonies reorganised their volunteer militias and for the rest of the century they were a significant element in colonial defences. Individual militia units were formed in many of the capitals' suburbs and in the more significant towns across the colonies. However, they fluctuated considerably in numbers and sophistication according to several variables including the potential threat of war and the willingness of colonial governments to invest in them.<sup>19</sup>

A heritage building complex that resulted from the Crimean War period is the Victoria Barracks, built in Melbourne to house resident British troops. Work began in 1851, but troop numbers swelled in 1852 following gold discovery, and the Barracks were significantly expanded after the headquarters of the Imperial army in the colonies was moved to Melbourne in 1854. A beautiful and still impressive bluestone complex was constructed.<sup>20</sup>

The New South Wales government was so concerned about the vulnerability of Sydney that it commissioned the construction of a small ketch, the *Spitfire*, that they armed with a 32-pounder gun; it was completed in 1855. Victoria, however, had rapidly developed as the wealthiest and most populous colony, which added to its sense of importance and enabled it to be the first colony in the Empire to acquire its own warsloop and thereby commence its own navy. In May 1853 a Royal Navy armed sloop arrived for special duty at Port Phillip, with part of the cost covered by Victorian government. However, it was old and inadequate, so the Victorian government purchased its own steamer warship, the HMCS *Victoria*, which arrived in 1856. It, too, was operated by Royal Navy

personnel but in the absence of military activity was employed in police and domestic duties.<sup>21</sup> The Victorian government also commenced work in 1856 on construction of a major slipway and ship repair facility at Williamstown. In 1868 construction would begin on a large dry dock, the Alfred Graving Dock. These were the first stages of the extant Williamstown dockyard.<sup>22</sup>

Williamstown was also chosen as the site of one of a new generation of coastal fortifications as a response to the vulnerability of the wealth of the gold rushes and the insecurity of the Crimean War. In the mid 1850s gun batteries were constructed at Point Gellibrand at Williamstown and at Sandridge, to protect the approaches to Hobsons Bay, the port at Sandridge and the Yarra entrance. Fort Gellibrand at Williamstown would play a continuing role as part of the Port Phillip defences through to the start of the twentieth century. In the late 1850s and early 1860s there were a number of temporary batteries around the shores in proximity to Hobsons Bay.<sup>23</sup>

In Port Jackson the news of the Crimean war resulted in a flurry of activity, both to improve existing batteries and to establish new ones at Middle and South Heads. Middle Head, Bradleys Head and Fort Macquarie already had guns mounted, and by May 1854 the new or improved batteries at Outer Middle Head, South Head, Bradleys Head, Pinchgut and Dawes battery were ready for guns.<sup>24</sup> However, in the middle of 1855 a new governor, Sir William Denison, suddenly stopped the works at the Heads and ordered the forts dismantled. He believed that all defences should be concentrated closer to the city, at Pinchgut and Dawes Point.<sup>25</sup>

This reflected the ongoing debate in both Sydney and Melbourne about where best to place protective fortifications. In the 1850s the limitations in distance and accuracy of the available guns in the colonies inhibited their capacity to protect the harbour entrances. Port Jackson is sufficiently narrow at a few points to have made it worthwhile to mount the latest generation of guns in the 1850s, if they could be acquired. The Port Phillip Heads was more difficult to defend at that time because of its greater distances, notably about 3.5 kilometres across the entrance. On the eastern side there is a narrow peninsula (Mornington Peninsula) that finishes at Point Nepean. On the western side the Bellarine Peninsula has two prominent headland points, Point Lonsdale at the entrance and further inside the Bay, Shortlands Bluff (Queenscliff). Projecting into the Bay from Queenscliff is Swan Island, effectively a low promontory. A few kilometres into the Bay is an extensive spread of sandy shoals. Here in later decades two locations were developed as man-made islands to carry defence works. While South Channel Fort was completed in 1887, Pope's Eye

annulus was abandoned and never completed. (See Map in Chapter 3) Selecting where and how to establish fortifications, and affording and acquiring the necessary equipment, were always the sticking points for both government and military engineers.

A lighthouse and other navigational aids were established from the 1840s on the western side at Shortlands Bluff at Point Lonsdale. A signal station was established there in 1852, which would have military as well as a maritime communication role, followed by a telegraph line to Melbourne in 1856. From 1856 there was a railway from Melbourne to Geelong, which would also assist in troop movement if required. While there were no fortifications at the Heads in the 1850s, land was reserved for military purposes.

In 1860 a man came on to the scene who would have a considerable impact on colonial defences over the next two and a half decades. Captain Peter Scratchley was in command of a detachment of military engineers sent to Melbourne to design and construct defence works in Port Phillip. The grandiose plans that he proposed over the next three years were a combination of defences at the Heads and at Hobsons Bay, but with the more significant defences closer in to Melbourne. The proposed fortification of the Heads consisted mainly of a fort at Queenscliff at Shortlands Bluff and further batteries at Point Lonsdale to protect the back of Queenscliff and to cover Lonsdale Bight in Bass Strait. After this was done, he argued, the 1856 batteries at Williamstown (Point Gellibrand) and Sandridge (Kerferd Road) should be replaced by a network of ten earthwork batteries spread along the shoreline overlooking Hobsons Bay, from Point Gellibrand in the west to Point Ormond in the east. He also recommended fixed defences at Geelong, Point Nepean, Swan Island, South Channel Island and Point King on the Mornington Peninsula near Sorrento. Scratchley strongly recommended that a powerfully armed ship be acquired to supplement the fortifications and to block entrance to the port. However, the cost of these was prohibitive and apart from a gun battery constructed at Queenscliff 1860-63, little else was done. Work began at Point Gellibrand and Point Ormond commenced, but was abandoned for a period because of a period of lesser threat and a reluctance to spend. Scratchley returned disappointed to Britain in 1863 but he continued to offer advice to the Victorian government and his plans, with their focus on the Heads, formed a blueprint for what was to be adopted in the 1880s.<sup>26</sup>



In the 1860s the British government was increasingly determined to shift more of the responsibility for their own defence onto the colonial governments. The economic drain of maintaining garrisons and naval vessels in the colonies and paying for or subsidising fortifications and other equipment was substantial. The colonial governments, on the other hand, were reluctant to take on too much defence expenditure. The result was long discussions and negotiations between governments and in the parliaments and newspapers over the decade, but it was becoming clear that a greater level of self-reliance was coming.

One of the more obvious results was that in the 1860s Victoria led the way in building a navy, something that was not considered necessary in NSW because the Royal Navy squadron was based in Port Jackson. In 1866 Victoria placed orders for two ships, a refitted wooden steam frigate as a training ship, the *Nelson*, and a purpose-built armoured monitor, the latest in naval technology, the *Cerberus*. The *Victoria* arrived in 1867. As described in Chapter 2, the experience of the American Civil War promoted the adoption in other nations of heavily armed and heavily protected monitor class warships. Victoria believed it needed one, too, so the *Cerberus*, a heavy and ungainly vessel that sat very low in the water to show only a minimal target, wallowed into Port Phillip in early 1871. The *Australasian Sketcher* noted her arrival in Port Phillip with a mixture of admiration and nostalgia:

... in the *Nelson* and *Cerberus* we have the extremes of a century in the agencies employed in naval warfare. Two vessels more unlike each other, and yet constructed for almost the same purpose, can scarcely be imagined – the one the very ideal of the line-of-battle-ship of naval romance, bristling with cannon and towering on the waves like a ‘castle of the deep’; and the other low, uncouth, and grim, and looking like a half-tide rock in the water, or, as has been irreverently expressed, like a floating gaswork, the two turrets being the gasometers.<sup>27</sup>

For a brief period the *Cerberus* was considered powerful enough almost alone to defend Port Phillip, but further technical developments had superseded her within a few years and although she has National Heritage Listing her sad carcass now rots away as a breakwater at Black Rock in Port Phillip.<sup>28</sup>

The American Civil War of 1861-65 had other effects on the colonies. It was a period of high tension between the United States and Britain, partly because of some British sympathy with the Confederate States. That was contributed to by the ‘*Trent* Affair’ in 1861 when, in defiance of international law, a United States navy ship stopped a British passenger ship, the *Trent*, and removed two Confederate diplomats on their way to Britain to try to raise arms and other

assistance. The British were infuriated and there was a period of high tension between the US and Britain which appeared likely to result in military hostilities. That was avoided, but for the duration of the war the Australian colonies felt some unease about possible military action between Britain and America.

The divided loyalties in the colonies about the opponents in the Civil War were demonstrated by the *Shenandoah* incident. CSS *Shenandoah* was a repurposed British merchant ship that was converted into a Confederate armed raider that roamed the oceans attacking, sinking and capturing United States merchant ships. Much to the amazement of the people of Melbourne, in January 1865 *Shenandoah* slipped quietly into Port Phillip and anchored off Port Melbourne. The vessel was in dire need of refitting and although this was questionably legal, given the technical status of British neutrality, the Victorian government gave permission for it to stay and be refitted. Huge crowds flocked to Port Melbourne to see the ship, and during their 24 days in town the officers were feted with numerous social events. When *Shenandoah* left in February, it had up to forty recruits hidden on board, another breach of neutrality laws. The *Shenandoah* returned to its raiding, destroying significant numbers of American merchant ships and whalers. After the war the United States demanded damages from Britain for a number of claims, including the events in Melbourne, and the British eventually paid significant damages.<sup>29</sup>

In Port Jackson in the 1860s there were numerous inquiries and plans, but few changes to the existing fortifications. In 1869 there were 72 mounted guns, all rather obsolete muzzle loaders, and all close in to Sydney Cove as Bradleys Head had been dismantled. The guns were at Dawes Battery, Fort Denison, Kirribilli Point Battery, Macquarie Point Battery and Fort Macquarie, and each of these was considered either useless or severely limited in its capacity, depending on the commentator.<sup>30</sup>

Outside the two main capitals small gun batteries were established at Newcastle in 1866 and Port Fairy in 1867 but not in the other Australian colonies during the decade, where there was similarly a lot of talk and various reviews, inquiries and proposals, but also little if any development of coastal fortifications. The cost was always considered too great. Adelaide and Brisbane remained undefended except by their militias. Hobart achieved some renovations to existing gun emplacements and finally saw the completion of the Queens Battery with seven guns on the north side of Sullivans Cove in 1865.

Meanwhile, after a great deal of wrangling the British government announced in 1869 they would withdraw all British military garrisons in 1870.<sup>31</sup>

A new era for colonial defences would begin.

## CHAPTER FIVE

### 1871-1884

The withdrawal of the last British troops from the Australian colonies did not leave them without protection by the mother country since the Royal Navy ruled the global waves and continued to have a presence in Australasian waters, albeit intermittent and not the best quality vessels. Nevertheless, the colonial sense of vulnerability was heightened and in the coming decades the colonies moved more purposefully towards the establishment of their own defence systems. As an example, annual defence expenditure rose from £31,362 in 1870 to £180,677 in 1884 in NSW, and from £63,157 to £130,137 in Victoria.<sup>32</sup> There was a significant increase in the number of men in the permanent military forces; between 1870 and 1884 they rose from 22 to 330 in NSW, and from 156 to 258 in Victoria. In the same period, the number of militia and volunteers was reduced from 3225 to 2551 in NSW, and from 3832 to 2549 in Victoria, which indicated an evolution towards professional rather than part-time forces.<sup>33</sup> The expanding forces included a small number of naval vessels and increasingly numerous and better armed coastal fortifications. By the mid-1880s all the colonial capitals except Perth had adjacent coastal batteries, although those in Port Phillip and Port Jackson were by far the most sophisticated.

The departure of British garrisons and greatly reduced British financial assistance for defence forces forced the colonies to look more closely at their own security measures. They also led to a growing realisation that the colonial governments needed to consult more with each other. This resulted in the early (although generally inconclusive) talk of greater cooperation across a range of issues including defence. In turn, this produced preliminary suggestions about the colonies becoming united in some broader political form. Symbolic of the changing times was the opening of the often-delayed joining of the Victorian and New South Wales railways at Albury, on the Murray River, in June 1883. While this was a major move forward in terms of intercolonial cooperation, its limitations were encapsulated by the fact that the two colonies steadfastly held to their different railway gauges, and for the next century people and goods travelling between Melbourne and Sydney had to change trains at the Albury junction.

A more significant development was the transformation of intercolonial connections and communications with the outside world. Steam vessels were becoming more efficient and faster,

facilitating intercolonial and overseas travel and trade, but also with implications for the potential unexpected arrival of foreign warships. By the end of the 1850s most of the colonies were connected to each other by telegraph, but not yet beyond Australian shores. During the 1860s the fastest overseas news came via the mail steamers which were met at Albany by a vessel from Adelaide carrying reporters, who on a speedy trip back to Adelaide condensed the news from British newspapers for telegraph communication to the eastern colonies as soon as they landed. In 1872 the north-south telegraph link from Adelaide through central Australia to Darwin via Alice Springs was opened, connecting to an underwater cable into Asia and then on to Britain and Europe. In some ways the new service proved to be a double-edged sword. The colonies were now less isolated, but they were also more aware of fluctuating international relations. When the telegraph was operating satisfactorily and tensions were not high, they were reassured. However, when tensions were high or the telegraph system failed (as it periodically did), colonial alarm was heightened.

There were many situations that caused alarm in the decade and a half after the British withdrew their garrisons. Wars in Europe in 1870-71 and tension between Britain and the United States caused such concern in Sydney that its fortifications were reorganised and put on an active footing.<sup>34</sup> As discussed below, Britain's tendentious relations with Russia were the main source of alarm in the 1870s and 1880s, but closer to the colonies some European nations and the United States were showing increasing interest in expanding their territorial claims into Asia and the Pacific. In the early 1870s the colonies were pressing Britain to annex Fiji to keep out potential trading threats. Subsequently, German interest in New Guinea and the Solomon Islands and apparent French ambitions in New Hebrides led the colonial governments to urge the British to claim these territories. Britain was reluctant and in an extraordinary act the Queensland government took matters into its own hands in April 1883 and annexed south-eastern New Guinea (Papua) in its own name. In November 1883 a conference of Australasian colonies including Fiji and NZ was held to discuss the issue. They finally agreed to form a Federal Council as a body where matters of common interest could be discussed, but as NSW refused to join there was no immediate action to have it formally established. In the interim, Germany annexed north-eastern New Guinea and New Ireland, and the British took over Papua from Queensland. The colonies remained unhappy with what they saw as a failure of Britain to support and protect them.

International tensions bubbled along until a combination of events in 1876-78 spurred serious action on colonial defence arrangements. In 1876 the Victorian government appointed a Royal Commission into its defences. Its report about their poor and outmoded state galvanised action, but not only in Victoria. One recommendation was to appoint an expert military engineer to examine the defences and prepare a plan for the future. NSW, Queensland and South Australia joined with Victoria in commissioning military engineers General Sir William Jervois and Colonel Peter Scratchley (who had previously served in Melbourne) to assess their defences and to make recommendations. In due course, Tasmania and Western Australia were also visited and assessed as part of the emergence of an Australia-wide system. Indeed, it was defence concerns that from the 1870s initiated moves towards colonial cooperation that would lead to their federation in 1901.

Jervois and Scratchley first visited NSW in 1877 but before Jervois could take matters much further he was appointed Governor of South Australia. There he undertook the report on Adelaide's defences and continued to be involved in writing other reports, but most of the subsequent inspections and recommendations in the other colonies were the work of Scratchley. Their sometimes prohibitively expensive recommendations were made in a series of reports in 1877-81, and these were substantially implemented in Port Jackson and Port Phillip over the next few years. Adoption elsewhere was often slower because of the cost, but the Jervois-Scratchley reports formed the principal guides for colonial defences into the early twentieth century. Scratchley was also employed by some of the colonies to undertake detailed design of their overall defences and specific fortification sites. His influence continued after the initial reports, as from 1882 he was employed by the Colonial Office as a defence advisor for Australia. In that role he continued to recommend changes and improvements and provide designs in defence arrangements, fortifications and ordnance until he was appointed to New Guinea in 1884. There he contracted malaria and died on his way back to Australia in 1885 after influencing Australian defences and fortifications over a period of more than twenty-five years.<sup>35</sup>

In all the colonies Jervois-Scratchley made recommendations for improving and reorganising the colonial militias and armed servicemen, much of which occurred and is outlined by such authors as Nicholls, Marmion and Oppenheim.<sup>36</sup> When it came to coastal defences, elaborate and expensive arrangements were recommended by Jervois-Scratchley for Port Phillip and Port Jackson. These would be focussed on the harbour entrances, a final confirmation of the adoption of a forward defence policy for the two cities. To start, there should be considerable improvements in

fortification designs and they should be equipped with better armaments, notably long-range, breech-loading, rifle-bored artillery in the main existing sites near the entrances to the harbours. The main batteries were to be supplemented with the addition of several new emplacements on vantage points on nearby coasts and small islands. All these would be supported by new defences within the Heads that combined torpedoes (both stationary mines and mobile torpedo boats), searchlights for night illumination, and with small and fast vessels backed by powerful armoured ships like the *Cerberus*. The recommendations also included the construction of new outer fortifications as extra protection along adjacent vulnerable coastlines to prevent attacks from behind. Most notable were fortifications at Point Lonsdale to defend Queenscliff and better to cover the Port Phillip entrance (land reserved but not constructed for several years), and on Bare Island in Botany Bay to defend Sydney from a beach landing and overland attack. Much of this was implemented, as is detailed below and in the second thematic paper.

The various reports on other colonies also recommended the strengthening of Hobart's fortifications and the construction of fortifications at Adelaide and at the mouth of the Brisbane River. Further afield, it was recommended that fortifications be built at: King George Sound (Albany) to protect the crucial mail steamer and passenger shipping and the coal depot; Newcastle to defend the coal-rich region; two sites at Townsville which was an increasingly important agricultural and trading port; Thursday Island off the top of Queensland where Torres Strait was seen as a vulnerable point for trade to the colonies and the Pacific; and along the Victorian west coast at Warrnambool, Port Fairy (improve the existing emplacement) and Portland which were significant centres for the rich Western District.

The Jervois-Scratchley assessments coincided with a significant war scare that added an urgency to their work and resulted in many of their recommendations being adopted. A major source of alarm in the 1870s and 1880s was Russian expansion into the Ottoman (Turkish) empire in Eurasia and into northern India, both of which were resisted by the British as a threat to their interests. After war broke out between Russia and Turkey in 1877 the British moved to prevent a Russian conquest of Constantinople and the Dardanelles, and for a few months in 1877-78 it appeared likely there would be war. It did not eventuate, but the tension and the ongoing threat from Russian activity into the 1880s served to wake up the colonies, focus serious attention on Jervois-Scratchley and begin a process of serious reorganisation and rearmament within their budgetary means. Most

immediate attention was given to the capitals, but in the next decade or so fortifications were also constructed further afield.

In Port Jackson, in brief, by the early 1880s several headlands near the entrance were significantly modified, fortified and re-equipped, including Bradley's Head, George's Head, Middle Head and South Head. Work had also begun on the fortification of Bare Island in Botany Bay. [North Head?] Inside Sydney Heads the fortifications were being complemented with lines of contact mines and electrically fired mines that would channel enemy ships into the line of fire from the forts. Two torpedo boats, *Acheron* and *Avenus*, were in operation, initially with spar torpedoes but later converted to launch self-propelled torpedoes. Jervois-Scratchley also recommended the purchase of an ironclad, but this proved too costly.<sup>37</sup>

In Port Phillip the pattern was similar. The Jervois-Scratchley reports and the 1877 Forts and Armaments Act produced a major defence overhaul, introducing the first integrated defence scheme (land forces, fixed defences and navy) all under a new Minister of Defence assisted by a Council of Defence. A forward defence policy was adopted which resulted in most of the fortifications near Port Melbourne being closed, with their best guns moved to Queenscliff. However, Fort Gellibrand at Williamstown was retained as part of the overall Port Phillip defence system and was significantly improved through until the 1890s.

As well as further development and rearmament of Queenscliff, Jervois-Scratchley recommended a fort at the other side of the Heads at Point Nepean, and that batteries be built on Swan Island and South Channel Island, and work proceeded on these in the early 1880s. In due course, the tip of the Nepean Peninsula would have a number of batteries installed. Besides the enhanced fortifications, in the early 1880s preliminary work commenced to prepare minefield sites near the shipping channels at the Heads. In the mid 1880s the Royal Victorian Navy was nearing its greatest strength, and was the largest colonial navy in the Empire following the acquisition of two gunboats, *Victoria* and *Albert* and torpedo boats *Childers*, *Nepean* and *Lonsdale*, supplemented by a number of small, armed auxiliary vessels and in 1886 two more torpedo boats. A torpedo boat depot was established at Swan Island. A military railway from Geelong to Queenscliff was completed in 1879.<sup>38</sup>

Because of cost and other complications, there was little or no progress on a number of other Other fortifications were constructed at a few vulnerable points around the Australian coast in response to the 1877-78 Russian scare and the Jervois-Scratchley reports. They recommended two fortifications in Adelaide, and as a result Fort Glanville at Semaphore was completed 1880 and Fort



Largs in 1884. They were complemented by the *Protector*, a gunboat acquired by the South Australian government to protect the coastline, commissioned in 1882 and arrived 1884. In Brisbane, Fort Lytton was completed at the mouth of the Brisbane River in 1882, and in 1884 the Queensland government purchased two small warships, the *Gayundah* and *Paluma*, and a torpedo boat, *the Mosquito*. Work also began at the start of the 1880s on strengthening and remodelling Hobart's defences and the acquisition of a torpedo boat in 1884, the *Abingdon*, but there was only slow progress. There was some strengthening of the Port Fairy battery, and at Newcastle Fort Scratchley was constructed in 1881-82.

recommended sites. After another Russian crisis in 1885 and concerns about European expansion into the Pacific security led to a new spurt of activity in the late 1880s and early 1890s. These included: in Western Australia at Albany; in Queensland the fortifications recommended at Townsville for the Kissing Point Fort and the Magazine Island Battery, and at Green Hill on Thursday Island; and the Victorian Western District ports of Portland and Warrnambool; They are outlined in the next chapter.

## CHAPTER SIX

1885 - 1901

Geoffrey Serle noted of the 1880s:

Melbourne's assumption that, if there had been a war, it would have been a prime objective of the Russians, despite its remoteness and the fact that there was only one Russian armoured cruiser in eastern seas, is a classic example of its pride and self-regard. Yet the insecurity of isolation, even in a period of overwhelming British naval supremacy, is a constant thread in Australian history. For years yet, newspapers and armchair strategists would argue that it would be an intolerable menace to Australia if the Russians reached the Indian shores and that the first line of Australian defence was in Afghanistan. [p. 204]

Melbourne was not alone in such fears and pretensions and there was a period of sustained concern in the Australian colonies about Russian expansion and potential war with Britain in the 1870s and 1880s. While Russia was the chief bogey, there was also concern about a wide range of nations including France, Germany and the United States. Increasingly added to this mix of perceived potential aggressors were Japan and China. The relative proximity of Asia and its many millions caused alarm about Asian (particularly Chinese) migration, while growing Japanese militarism added to the list of potential invaders. The relatively near-north became a new threat to colonial security. Overt racism was entrenched in colonial culture, one manifestation of which was discriminatory legislation culminating in the White Australia Policy of 1901. The levels of fear and alarm expressed by the colonists reached extremes that today seem somewhat ludicrous, even humorous.

One result was a spate of 'invasion literature', fictional stories about various combinations of foreign nations who were determined to grab Australia's tempting riches for themselves. Some were quite serious in intent but others were very much tongue in cheek. Both forms reflected and fed contemporary fears.<sup>39</sup>

One of the earliest was *The Invasion* by 'W.H. Walker' (George Ranken, 1877) about an attack on Sydney by a Russian fleet of four ironclads, three light steamers and twelve heavy transports. The ironclads remained outside the Heads shelling the centre of Sydney, providing a distraction and creating panic while a fleet of light steamers and heavy transports sailed into Botany Bay and disgorged over 6000 armed soldiers. Hand to hand fighting and artillery warfare raged over a large area south of the city centre, notably in Randwick, Moore Park, Redfern and Waterloo. Most of the defenders were civilian members of local volunteer units. There was considerable pillaging and

savagery on the part of the invaders. Just as it looked as if all had been lost and the invaders may overrun all of the defences, reinforcements arrived, including the City Rifles and the Goulburn and Bathurst Volunteers and other units from outside the city. The tide turned and the invaders were routed and the city was saved, but Sydney was left ablaze with thousands slaughtered.<sup>40</sup>

In 1885 an 'account' of an attack on Sydney was published by a 'Russian Naval Captain'. This land and sea attack was more successful and a large ransom paid before the invaders withdrew. [Cited in Oppenheim, p. 135] *The Battle of the Yarra: Or How We lost Australia* (1883) argued the need for the colonies to come together in a federation by describing a Russian force of 3000 men storming Port Phillip Heads, landing at Port Melbourne and, after a fight with Victoria's volunteer forces for control of the bridges over the Yarra, extracting a ransom of three million pounds.<sup>41</sup> *The Battle of Mordialloc* (1888) posed a joint Russian and Chinese invasion, intended to divide Australia between them. After cutting the overseas telegraph cables the fleet landed at Western Port to avoid the defences at Port Phillip Heads, and slaughtered the Victorian forces in the battle at Mordialloc. The Chinese then burned Melbourne.<sup>42</sup>

In a less serious vein, in the Western District of Victoria the *Hamilton Spectator* published a serial story in 1887 about a 'Dash for Hamilton' by Russian and Chinese forces. It was disclosed that the Russian Czar had long dreamed of conquering Hamilton and he enlisted the Chinese to assist this ambition. Their combined forces landed at Nelson, a hamlet on the south coast, and pushed north, overcoming the Victorian militia as they went. After a pleasant interlude in one of the towns they had captured, they moved on to Hamilton where the Hamilton Mounted Rifles gloriously beat them off. Peace was signed and the forces withdrew, but the Russian and Chinese generals were so impressed with the Hamilton district that they stayed and took up residence.<sup>43</sup>

This literature signifies the extent to which the period from the mid-1880s was one of mixed intense jingoism and exaggerated alarm. It began in 1884-85 with one of the great emotional episodes in the Empire - the siege and fall of Khartoum in the Sudan and the death of General Gordon. Across the Empire people followed the course of the siege and when news arrived that Gordon had been killed there was jingoistic outrage. The NSW government immediately offered to send a contingent in support of British forces in the Sudan. The offer was accepted, but a similar offer from Victoria was refused, much to their chagrin. A contingent of about 750 men set sail in March 1885, but they saw little action and were sent back home in May. While the expedition was in many ways of little

significance, it was nevertheless a major symbolic moment in Australian history. It was the first of many occasions in which far-off Australia would send military forces to support Britain (and later the United States) in their wars. This was done at least partly as a form of insurance, in the hope that the protective nation would return the favour if Australia were threatened.

Simultaneously in early 1885, overlapping with the Sudan war, Britain was on the brink of war with Russia following border skirmishes with Afghans as the Russians continued to expand their power into Afghanistan, and therefore to pose a threat to British India. In the colonies there was considerable alarm, messages raced between them and with Britain. Defence forces were put on alert as the colonies prepared for a Russian attack and. Even in Hobart, which surely was as unlikely a target as you could find, some residents withdrew their money from the banks and packed in preparation to flee inland. Nearly 300 men were engaged to dig a ditch around the Alexandra Battery and construct a redoubt.<sup>44</sup> Concern about the steamer coaling port at Albany resulted in the British sending two Royal Navy vessels to defend the harbour.<sup>45</sup> The call to arms showed up some weaknesses in the still incomplete Jervois-Scratchley defence systems but when, in May after weeks of tension, a diplomatic settlement was reached the calm was something of an anti-climax.<sup>46</sup>

Despite being so geographically remote, the Sudan war and the Afghan border crisis significantly stimulated colonial apprehensions about threats from the outside world and pushed the colonies into a more concerted effort to complete the recommendations of Jervois-Scratchley. The defence fears also resulted in a higher level of intercolonial cooperation. Most of the colonies had agreed in 1883 to form a Federal Council but it was not established until the 1885 Russian scare pushed the British government to pass enabling legislation. However, as NSW continued to refuse to join and South Australia failed to ratify its participation until 1888, its effectiveness was undermined.

More effective impetus towards cooperation came in 1886-87 when there was another point of high tension over the New Hebrides. France appeared to be on the point of annexing the islands and using them for another penal colony, and when in June 1886 a contingent of French marines from New Caledonia occupied part of the islands, most of the Australian colonies, particularly Victoria but not including NSW, became highly agitated. They demanded that the British government intervene. After long and tense negotiations between Britain and France the French forces withdrew and the issue died down, but the two nations continued to have a presence in the islands and eventually in 1906 agreed to a joint Condominium.<sup>47</sup>

The New Hebrides scare triggered further moves towards greater colonial unison. The first assembly of the new Federal Council took place on 25 January 1886 in Hobart, just as the New Hebrides issue was igniting and, although they were unable to agree on that matter, defence concerns promoted an increased frequency of consultation and communication. Most notable was the calling of a Colonial Conference in London in April 1887 where cooperation on improved defences was one of the main agenda items. The colonies were increasingly aware that a coordinated approach to defence would be more effective and potentially cheaper. At the same time, British government policy was also evolving to look upon the colonies as a potential resource that could be called upon in times of need, as had happened with NSW and the Sudan. Out of the Conference came an agreement to employ another military engineer to evaluate colonial defences and to make recommendations for future strengthening and co-operation.

There was a delay in making the appointment, but in the interim there were two significant events. First, in June 1888 the submarine telegraph cables were severed near Java, triggering two days of near-panic in the colonies who suspected that this was the prelude to an attack, probably by Russia. Second, in 1888 the British government enacted legislation that led to the winding down of the colonial navies. This followed an agreement at the 1887 Colonial Conference that in future the colonies would contribute financially to the Royal Navy which would provide an umbrella of defence vessels, the Australian Auxiliary Squadron.<sup>48</sup>

In 1889 the British government ordered Lieutenant-General Sir James Bevan Edwards to review the colonial military forces and defences. He spent three months inspecting the colonies but rather than detailed critiques and plans like Jervois-Scratchley, his reports were a mixture of rapid assessment of individual colonies overlain with broad comments about the general state of defences around the continent. One of his major concerns was the disunited and therefore ineffective state of the colonial defence forces. To overcome this he recommended: a federation of Australian colonial military forces under a single commander; uniform organisation and armaments; adoption of a uniform railway gauge; a federal military college; and a federal small armaments factory.<sup>49</sup>

Edwards found that the defences of Victoria and New South Wales were generally well planned and in good order, since by 1889 most of the Jervois-Scratchley recommendations for fortifications and militias had been implemented. However, he urged the NSW government to speed up the works as

they were not complete and were in a state of 'unpreparedness'. More broadly, Edwards had reservations about the colonial fortifications as they were focussed on a small number of points on the coast, and it would in many cases be relatively easy for an enemy to land further along the coast and attack them from behind. Therefore in some cases, such as Port Phillip, he recommended protective gun batteries be established at Point Lonsdale and Western Port. More frequently, he promoted the idea of mobile land artillery forces and, rather than building new fixed batteries, in some locations there should be 'floating defences', notably fast torpedo boats which were more economical and efficient. He suggested that Port Jackson would benefit by having more boats and fewer guns, with the surplus guns being sent to Thursday Island or King George Sound.

This points to a particular concern of Edwards, the vulnerability of the vast stretches of coastline in northern and western Australia. He recommended that fortifications be established in northern Queensland, Darwin and King George Sound, and a small battery at Fremantle, complemented by a torpedo boat. He had major reservations about the effectiveness of Adelaide's fortification because of the distances they were supposed to protect, and considered it one of those sites that might be better served by torpedo boats. Here, too, he proposed that some of the guns might be moved to King George Sound or Darwin. Edwards had strong reservations about the effectiveness of Hobart's defences, and also recommended a small fortification should be constructed at Launceston. To overcome isolation and vulnerability he urged that Darwin and Western Australia should be connected to the other colonies by rail as soon as possible.<sup>50</sup>

There were two major repercussions from the Edwards Report. First, his urgent recommendations for the colonies to form some cooperative federation resulted in a great deal of political and newspaper discussion, following which Sir Henry Parkes, the NSW Premier, took up the cause that others had been urging for some time. On 24 October 1889 in a stirring speech at Tenterfield he called upon the colonies to start working towards a political union. There was some scepticism given that NSW had refused to join the Federal Council, but an Intercolonial Conference met in Hobart in 1890 and agreed to initiate the necessary steps towards federation. A Convention in Sydney in 1891 drew up a Constitution, but progress slowed, partly because the next few years brought relative calm on the international scene and defence urgency faded. On top of that, the depression of the early 1890s changed the scene and directed attention away from federation. The cause was taken up again in the mid 1890s and moved slowly towards the declaration of the Commonwealth of

Australia on 1 January 1901. Defence was one of the main initial motives in bringing the colonies together to discuss federation, but by the late 1890s it was much less significant.

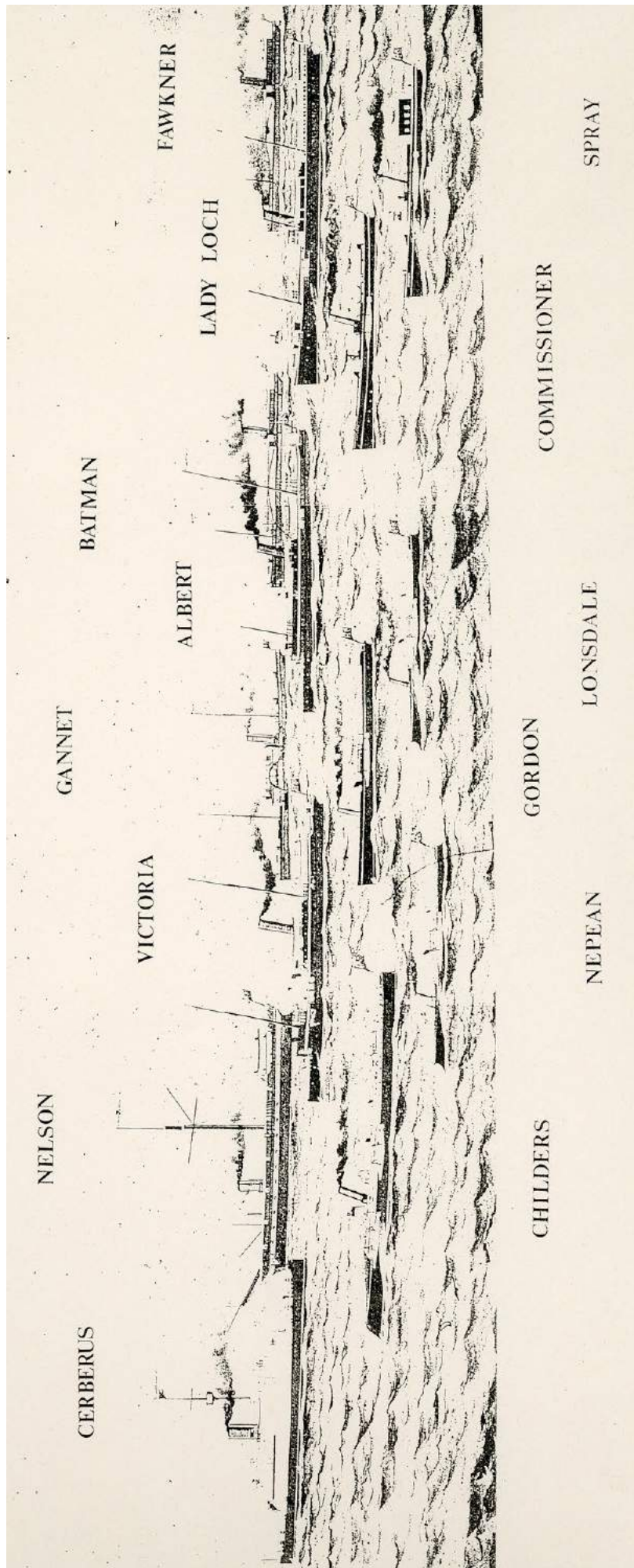
The second major result of the 1887 and 1888 defence scares and the Edwards report was to stimulate another brief spurt of defence activity including fortification renovation, reconstruction and innovation of new technologies. The major element in the Edwards Report, the unification of the colonial defence forces, was not achieved until the first decade of the twentieth century, but several other aspects were accomplished. Very significantly, the colonies and Britain agreed that something should be done to defend the vulnerable north-eastern and south-western points. Thursday Island, off northern tip of Cape York Peninsula was the centre of a pearling industry and was strategically placed to command the narrowest point of the Torres Strait between Australia and New Guinea. Albany on King George Sound was a vital point for seaborne transport and of communication between Britain and the colonies. In the first example of such intercolonial cooperation, the colonies and Britain agreed jointly to fund, equip and train fortifications at these places. Green Hill Fort on Thursday Island and Princess Royal Fort on King George Sound were constructed in 1891-93.<sup>51</sup>

There was some ongoing improvement and re-equipment of colonial defences in the 1890s, but relatively little after 1891 because of the economic depression and the period of lower international tension. As in previous times, there was seemingly endless debate about the best placement and design of batteries, the best guns and mounts, the best type and placement of torpedoes (both stationary mines and propelled torpedoes), torpedo boats and other equipment.<sup>52</sup> Despite all this, three new fortifications were established along the clifftops to the south of South Head in Sydney in the early 1890s, at Ben Buckler (Bondi), Signal Hill (Vaucluse) and Shark Point (Coogee). There was also a new battery at Henry Head at the entrance to Botany Bay. The first three were equipped with breech-loading hydro-pneumatic or disappearing guns, with a range of sixteen kilometres which gave them a capacity to hold potential enemy ships well out to sea. The disappearing guns were one of the principal innovations in the 1880s and the start of the 1890s and on Scratchley's recommendation they were acquired for many of the major fortifications. Besides their long range they fired exploding shells and they had the advantage of being able to hide between shots.<sup>53</sup>

Caption for following page: The Victorian Fleet by A. V. Gregory 1888; painting; watercolour on paper; mounted on canvas; framed and glazed. Royal Historical Society of Victoria Collection, ART-0317.001:







The increasing significance given by the mobility of torpedo boats and their capacity to strike at threatening ships, and the potency of stationary mines is shown in a graphic description of a mine laying exercise at the Port Phillip Heads in April 1895:

The work of the submarine miner is an important one in our scheme of defence. Were it not for the mine fields a dash at Melbourne would be a comparatively easy thing, in spite of the modern ordnance in the Queenscliff forts. The duty of the submarine miner is to hold attacking ships under fire or sink them if they dare to run the gauntlet. While there is nothing in naval warfare quite so dashing as the inward rush of a torpedo boat on some big cruiser, all the mystery and gruesomeness is with the ground mine, rolling midway between the surface and the sands, and wanting only the bump of a keel to strew the sea with the wreckage of an ironclad.<sup>54</sup>

The 1890s was not without its defence or military concerns. Japanese victory in the Sino-Japanese War of 1894-95, particularly the demonstration of Japanese sea power, drew attention to the potential threats from that emerging power and added to the existing mixture of racial and defence concern. In 1900 the South Australian ship *Protector* was sent to serve with the Royal Navy in China during Boxer Rebellion. And in the Boer War in South Africa 1899-1902 each of the Australian colonies sent contingents to demonstrate their support for Empire. As the colonies came together as a nation during the war, for the first time it could be seen that 'Australian' forces were playing their role in ensuring local security by overseas involvement.

Such was the development of coastal fortifications that from the mid-1890s, with their numerous big guns and multiple fortified points, complemented by torpedo boats, mines and other new technologies, both Port Jackson and Port Phillip laid claim to being 'the Gibraltar of the south'. At the time of federation there were 42 guns mounted in defence of Sydney, including at Coogee, Bondi, Signal Hill and other small batteries that had been established to support the main fortifications near the Heads.<sup>55</sup> At Newcastle the further development of Fort Scratchley was complemented by a new battery at Shepherds Hill at the end of the 1880s. In Victoria, Portland, Port Fairy and Warrnambool had also reached their peak after they were constructed or upgraded from the late 1880s. Between 1889-93 the Queensland government improved its coastal fortifications at Fort Lytton on the Brisbane River, and at Magazine Island and Kissing Point at Townsville. There appears to have been little further development in Adelaide or Hobart during the 1890s. A high proportion of the colonial fortifications had been supplied with hydro-pneumatic or disappearing guns.

In the late years of the century there were also two small and short-lived batteries/fortifications established at Launceston and Westernport (not dealt with in this study) and a larger and more significant one at Wollongong that is described briefly below.<sup>56</sup>

In summary, by the early 1890s there was a loose chain of substantial fortifications ringing the southern and eastern coastlines at what were perceived to be the most vulnerable points. In hindsight the expenditure seems hard to justify, and might be seen as a manifestation of the colonists' exaggerated sense of self-importance and paranoia. Such an observation does not detract from their heritage significance, but underlines how important the fixed defences were in the minds of the colonists. Not only did fortifications never in the nineteenth century have cause to fire their guns except in training, the likelihood of any attack except perhaps on Melbourne or Sydney seems highly remote because there was little clear benefit. Why, for instance, would any foreign power decide to attack the rural export ports of Port Fairy or Portland? The only sites outside the two main harbours that might offer a significant advantage for a foreign power were Newcastle for its coal mines and Albany (and perhaps Townsville) for their coal supply and strategic sites. On top of all that, fixed position fortifications were steadily becoming obsolete as new technologies passed them by.

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- <sup>2</sup> Hyslop, pp. 26-28.
- <sup>3</sup> Boyce, Dean, *Invasion of Sydney: Fears and counter-measures of an isolated colony*, Halstead Press, Sydney, 2007, p.2
- <sup>4</sup> There is a small library of work on nineteenth century fortifications and weapons, but for discussions in the Australian context see Billett, R. S., 'Defences of Hobson's Bay and Port Phillip 1870-1901', MA Thesis, University of Melbourne, 1994B, pp. 44ff; Oppenheim, Peter, *The Fragile Forts: The fixed defences of Sydney Harbour 1788-1963*, Canberra, 2004; Kitson, Michael. *Brennan torpedo, monorail and helicopter: a study of innovative activity in the process of forming three related military weapons. Chapter 4. Factors in the problem of the defence of Port Phillip Heads 1877-1910.* pp 167-186. Doctoral Thesis, Deakin University – 1999.
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- <sup>8</sup> Oppenheim, *passim*; Marmion, *passim*.
- <sup>9</sup> Oppenheim, pp. 6ff
- <sup>10</sup> Boyce, pp 21ff
- <sup>11</sup> Oppenheim, pp. 20-21
- <sup>12</sup> Boyce, p. 32
- <sup>13</sup> Boyce, p. 39
- <sup>14</sup> Oppenheim, p.49
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- <sup>20</sup> See online listings for Commonwealth Heritage List and Victorian Heritage Database
- <sup>21</sup> Jones, Chap 3
- <sup>22</sup> Williamstown Graving Dock, Victorian Heritage Database online
- <sup>23</sup> Marmion, p. 95; See Quinton, Fort Gellibrand, in second thematic paper.
- <sup>24</sup> Boyce p. 50
- <sup>25</sup> Boyce pp. 51ff
- <sup>26</sup> Marmion, pp. 64ff
- <sup>27</sup> *Australasian Sketcher*, 5 September 1874, quoted in Jones, p. 35
- <sup>28</sup> Billett, pp. 28-30; Jones, Chap 4; Evans, Wilson, *Deeds Not Words: the Victorian Navy*, Melbourne, 1971, Chap 5; Marmion, pp. 158ff; HMVS *Cerberus*, National Heritage List, online.
- <sup>29</sup> Billett, pp. 21-3
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- <sup>31</sup> Billett, Chap 1
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- <sup>35</sup> Sir Peter Scratchley, entry in *Australian Dictionary of Biography*, <http://adb.anu.edu.au/biography/scratchley-sir-peter-henry-4552>
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<sup>43</sup> Garden, Don, *Hamilton: A Western District History*, Hargreen, 1984, p. 157

<sup>44</sup> Scripps, p. 19

<sup>45</sup> Garden, *Albany*, pp. 221-2

<sup>46</sup> Oppenheim, p. 135-7; Serle, p.p, 203-4

<sup>47</sup> Serle, pp. 206-12

<sup>48</sup> Meaney, pp. 23ff

<sup>49</sup> *Argus*, 15 October 1889, p. 9; Billett pp. 95ff

<sup>50</sup> Edwards, Major-General, 'Military Forces of the Australian Colonies', New South Wales Legislative Assembly, Votes & Proceedings, 2nd Session 1889; Edwards, Major-General, 'Military Forces of the Colony', New South Wales Legislative Assembly, Votes & Proceedings, 2nd Session 1889; *Argus*, 15 October 1889, p. 9; *South Australian Register*, 16 Oct 1889, p. 5; *Mercury*, 19 Oct 1889, p. 4; *West Australian*, 28 Oct 1889, p. 3; *Inquirer & Commercial News*, 30 Oct 1889, p. 3; *Logan Witness*, 2 Nov 1889, p. 3; *Brisbane Courier*, 11 Nov 1889, p. 5 & 30 Nov 1889, p. 1.

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<sup>52</sup> eg Kitson, Chap 4; Boyce; Oppenheim.

<sup>53</sup> Boyce, p. 111, Chap 9, pp. 132-39

<sup>54</sup> *The Australasian*, 27 April 1895

<sup>55</sup> Oppenheim, p. 187

<sup>56</sup> [https://en.wikipedia.org/wiki/Smiths\\_Hill\\_Fort](https://en.wikipedia.org/wiki/Smiths_Hill_Fort)

## **PART TWO – FORTIFICATIONS OTHER THAN PORT JACKSON AND PORT PHILLIP**

While in the last two decades of the nineteenth century the main focus of fortifications was on the entrances to the harbour sites of the two main colonial capitals, Melbourne and Sydney, in each of the other colonies there were new defences, generally in defence of the capitals but also on a few other major sites. The requirement for this study was an examination of east coast sites, but to give a complete picture eleven coastal fortifications have been included.

The following chapters give brief historical outlines of each of those fortifications. Apart from Wollongong, they have mainly been written by members of volunteer organisations, both local and specialised historical societies.

Albany is given special emphasis because this paper has concluded that it has a range of significances, including its fortification and military roles, that qualify it for consideration for its own National Heritage Listing.

It is understood that there may be a move to nominate Australia's nineteenth century coastal fortifications as a group for World Heritage Listing. This thematic paper provides background to such a potential nomination.



## **PRINCESS ROYAL FORT KING GEORGE SOUND – ALBANY**



**With recommendation for separate National Heritage Listing for  
King George Sound, Princess Royal Harbour and the City of Albany**

## EXISTING STATEMENTS OF SIGNIFICANCE

The **Western Australian Register of Heritage Places** lists Albany Forts (Princess Royal Battery/Barracks) as a heritage place as follows:

Albany Forts, a renovated artillery battery and army barracks, consisting of two guns, an underground magazine, numerous transported buildings, ruins, a few substantially reconstructed buildings and a parade ground, has cultural heritage significance for the following reasons:

the place formed part of the strategic defence of Australia from colonial times, being an early example of federal co-operation of the states, and through two world wars;

it was the principal rendezvous for Australian and New Zealand troops departing on overseas service during World War One;

it is now a unique military heritage park;  
it has a landmark quality; and,  
the place is highly valued by the community.

**The Great Southern Land Thematic Study** recommended Princess Royal Fort for National Heritage Listing as follows:

The Albany Forts, erected in 1893, is historically important as a defensive fortification erected in the colony of WA as a consequence of early inter-colonial cooperation on defence resulting from the withdrawal of British military forces by 1870, the growing importance of steam shipping and the importance of the international shipping routes to all colonies. The Albany Forts comprise the Princess Royal Battery consisting of two guns, the command post, Parade ground, the Albany Barracks and an underground magazine.

The construction of the forts arose from inter-colonial meetings and was jointly funded by the colonies prior to Federation. The Federation Conference of 1890 had appointed a Colonial Defence Committee to inspect and report on the fortification of Albany and Thursday Island and also Port Darwin. In 1891 the Committee recommended proceeding with the first two but not Port Darwin. Construction of the Princess Royal Fort at Albany was completed in 1893 when it was garrisoned by a SA colonial contingent. All colonies contributed to the cost except Tasmania.

This joint funding clearly demonstrates the perception of the colonies that defence of the major sea routes linking Australia with Europe and Asia was a matter beyond the capability of individual colonies, and foreshadowed a key element in the transfer of powers to the Commonwealth at Federation in 1901.

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#### Criterion (b)

Albany Forts site is rare as it is directly comparable only with the Green Hill Fort on Thursday Island, as they share the historical context of being built by inter-colonial cooperation to protect international shipping routes. As such the site is uncommon.

## **PROPOSAL FOR NATIONAL HERITAGE LISTING OF KING GEORGE SOUND, PRINCESS ROYAL HARBOUR AND ALBANY**

**The Great Southern Land Thematic Paper** recommended the Princess Royal Fort for National Heritage Listing. This report endorses that recommendation, but proposes to widen the nomination to include King George Sound, Princess Royal Harbour and the historical precinct of the City of Albany because of their demonstrable outstanding heritage value to the nation.

### **STATEMENT OF SIGNIFICANCE**

Albany in Western Australia is situated on Princess Royal Harbour, one of two protected harbours that lie off King George Sound, on the south coast of the continent, towards the south-western tip. The Sound was visited and remarked upon by a number of early European explorers for its great potential as a harbour, and was selected in 1826 as the site of a small penal settlement, to deter French ambitions in the western part of the continent. It was therefore the first place to be colonised by the British in Western Australia, three years before Perth.

In later decades Albany and the Sound would become one of the most significant transport, communication, strategic and symbolic military sites on the Australian continent.

It is also an area of significant and even unique flora, notably the carnivorous Albany pitcher plant, *Cephalotus follicularis* Labill.

The early Albany settlement is remarkable for the amicable relations between the Indigenous inhabitants and many of the colonists, that were sustained for the first two decades of colonisation. In particular, the friendship between Resident Magistrate Alexander Collie and Mokare, a Nyungar man of the Minang people, seems without equal. On his own request, Collie was buried beside Mokare in 1835.

Albany became a significant whaling base in the 1830s and 1840s, for vessels from many parts of the globe. Whaling came and went as a local industry over coming decades, but it operated again after WWII as the last Australian whaling base, until nation-wide protests and changing economics put an end to the industry in the 1970s.

In the early 1850s Princess Royal Harbour at Albany was chosen to be a coal bunkering depot for steamers on the main route between Britain and the colonies, central to mail communication, and passenger and freight traffic. The mail service was disrupted during the Crimean War, which emphasised even further how significant it was for all the sense of wellbeing in the Australian colonies. Thereafter Albany remained a focus of British mails, and of the sea trade for the colonies until the turn of the century. Most people who travelled between the colonies and Britain in the last decades of the century would have been on vessels that bunkered at Albany. For much of that time, a welcome by the Indigenous inhabitants was part of the tradition.

Albany has inherited a remarkable extant precinct of mercantile, hotel and other heritage buildings, including a unique three level customs house and post office, dating from its time as the steamer port in the second half of the nineteenth century.

Because of its strategic significance there were many recommendations, including in the Jervois/Scratchley reports of the late 1870s, for Albany and Princess Royal Harbour to be fortified. Such moves were resisted by the Western Australian government because of cost and because it wished to move the steamer port to Fremantle. Finally, after the visit to Australia by Lieutenant-General Sir James Bevan Edwards in 1889, in which he pointed to the vulnerability of colonial defences, Britain and the other colonies agreed to contribute to the establishment and operation of the Princess Royal Fort and Green Hill Fort on Thursday Island. It was the first example of such intercolonial cooperation; the colonies agreed jointly to fund, equip and train fortifications at these places. Princess Royal Fort was constructed in 1891-93.

Edwards' reports stimulated a new round of moves towards the federation of the colonies but Western Australia held out until the last minute. In part, this was because the Premier, Sir John Forrest, used the Albany steamer depot as a bargaining chip. It was not until the other colonies agreed to his demand for the depot to be moved from Albany to Fremantle that Western Australia came into the federation.

While the Albany port declined in the early twentieth century, it was the site of three further events of national significance. In 1908 the propaganda tour of the American Great White Fleet to the Pacific was both an assertion of American power aimed at applying a brake on Japan, and a reassuring affirmation of relations with Pacific countries including Australia. The Fleet visited Sydney, Melbourne and Albany where they were given great public welcomes.

Secondly, of great national significance, in October 1914 King George Sound became the gathering point for the convoy of vessels taking the first contingent of Australian and New Zealand soldiers to the northern hemisphere. In one sense, this is where the Anzacs were born, when between 24 and 31 October twenty-six Australian merchantmen and ten from New Zealand, with 30,000 troops, were coaled and prepared for their voyage to Egypt. They were protected by the Princess Royal Fort and six warships.

Third, the ongoing importance of the Sound, Princess Royal Harbour and Albany was demonstrated by the post WWII construction on Mounts Clarence and Adelaide of the ANZAC Desert Mounted Corps Memorial, a duplicate of the original statue erected in Suez in the 1930's, and the National Anzac Centre was also built there to mark the centenary of the initial gathering of the Anzacs and the start of WWI.

### **COMPARATIVE STUDY**

A comparison of Albany with other coastal towns is difficult in the sense that there are none with the same suite of values as Albany. In terms of age, geographically strategic role for transport, communication and defence, and its other values including (most importantly) cultural heritage significance, there are no places outside the colonial/state capitals that are relatively comparable. Five might be compared on some grounds, but none has the same degree or complexity of significance.

Fremantle – Albany's competitor in the nineteenth century to be the main Western Australian port, but it was not the focus of similar international transport and defence activities, nor of most of the other values possessed by Albany as described in this assessment. It has a good suite of extant colonial buildings and a rich history in terms of its convict and other colonial establishments, and might be advanced for assessment on the basis of some of these, but Albany's suite of values is arguably richer, especially prior to 1914.

Launceston – its European foundation pre-dated Albany and, while it became the main port and town in northern Tasmania, and has a good suite of extant colonial buildings, it has no apparent claims to national significance.

Portland – its unofficial European settlement was less than a decade after Albany and, while it became an important port in Western Victoria and was fortified late in the nineteenth century, and has a good suite of extant colonial buildings, it has no apparent claims to national significance.

Newcastle – older than Albany and significant as a port for the coal and agricultural resources of the Hunter Valley, and has a good suite of extant colonial buildings, but it lacks the broader national significance of Albany in transport, communication, defence and the Anzacs, etc.

Townsville – European settlement was much later than Albany and, while it became an important port in North Queensland and was fortified late in the nineteenth century, it has no apparent claims to national significance.

This proposal needs further work but in summary, outstanding heritage significance value to the nation may be found under a number of headings relating to:

- Defence – the Princess Royal Fort
- Federation – Albany used as a bargaining chip in negotiations by WA government
- Transport and communication, particularly the steamer bunkering depot
- Rare and unique natural history
- The nineteenth century waterfront buildings
- The whaling industry and whaling station
- Rare or unique early amicable relations between the Indigenous inhabitants and British colonists.
- Association with Sir Peter Scratchley, General Sir William Jervois and Lieutenant-General Sir James Bevan Edwards.

Where these may fit:

***(a) The place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history.***

- Role in national defence
- Role in steps to Federation
- Role in transport and communication, notably mail steamers, major refuelling port, and telegraph between the colonies
- The unpleasant but major role in the Australian whaling industry – the last Australian shore base to be closed in the 1970s.
- Its unique suite of nineteenth century mercantile and other buildings.

***(b) The place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history.***

- Rare or unique amicable early relations between the Indigenous inhabitants and British colonists.

***(d) The place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of a class of Australia's natural or cultural places; or a class of Australia's natural or cultural environments.***

- Worthy of expert analysis because of some rare or unique species and ecosystems in the region including the Albany pitcher plant, *Cephalotus follicularis* Labill.

***(h) The place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.***

- Association with Sir Peter Scratchley, General Sir William Jervois and Lieutenant-General Sir James Bevan Edwards, three British officers who were involved in the design and development of the Australian nineteenth century coastal fortifications.



# **PRINCESS ROYAL FORT KING GEORGE SOUND - ALBANY<sup>1</sup>**

Don Garden

Associate Professor Don Garden, OAM FFAHS, FRHSV, is the President of the Federation of Australian Historical Societies, Immediate Past President of the Royal Historical Society of Victoria, and until June 2019 a member of the Australian Heritage Council. For many years he taught History and Environmental History at the University of Melbourne, where he is now an Honorary Fellow. He has written seventeen books, a mixture of local and regional histories, biography, company history, an environmental history of Australia and the Pacific and a history of El Nino events in Australia, New Zealand and the Pacific.

In October 1826 a French scientific and exploration expedition led by Captain J.S.C Dumont D'Urville, visited King George Sound on the south-western coast of Western Australia. D'Urville was highly impressed with what he saw:

Taking all this into consideration, I then thought that it would be difficult to come upon a more favourable place to found a colony, so I am continually amazed that the British have not already done so, especially when I reflected that this point was admirably situated, as much for the ships which sail direct from Europe to New South Wales as for those intending to go from the Cape to China or to the Sundra Islands against the monsoon.<sup>2</sup>

The British and their colonists in eastern Australia were already aware of French interest in the continent, and were concerned about possible French ambitions to make territorial claims. So it was not entirely coincidental that a few days after D'Urville's visit to the Sound a party of convicts and guards sailed from Sydney to establish a holding settlement and to assess its suitability for a new penal settlement.

King George Sound is a deep open bay adjacent to which lie two smaller protected harbours, Oyster Harbour and Princess Royal Harbour. It was on the north shore of the latter that the party of convicts and guards arrived on Christmas Day in 1826 and established the settlement that became the town of Albany.

Although the convicts were withdrawn in 1831 after the establishment of the Swan River Colony, the Albany settlement survived as it was a valuable harbour for visiting vessels seeking respite from the wild southern oceans and to replenish stores. The settlement catered also catered to the whalers who worked the coast. Albany was also a remarkable settlement for the high level of accord that existed for many years between the Indigenous inhabitants and the colonists, and especially between Resident Magistrate Alexander Collie and Mokare, a Nyungar man of the Minang people.<sup>3</sup>

The position of King George Sound on the south coast towards the south-western tip of the continent gave it great strategic, transport, communication and commercial significance over the next century. The first settlement commander, Major Edmund Lockyer, commented in 1827 on the strategic need to continue maintain a presence at the Sound:

The importance of King George Sound as a place necessary to occupy must strike every person acquainted with this country. An Enemy holding it would with cruizers [sic] completely cut off the trade, except by Convoys, to Van Diemen's Land and Port Jackson, from Europe, the Cape, Isle of France and India.<sup>4</sup>

Such thoughts were seldom far below the surface in coming decades and indeed Albany would become one of the most strategically significant ports on the Australian coast. While its commercial and defence roles are now little recognised it had such significance in a number of aspects of Australian history that the Sound and the town seem worthy of National Heritage Listing in their own right. This report recommends that an assessment be undertaken by the Department.

The establishment of the mail steamer port in Princess Royal Harbour in the 1850s (as outlined in Chapter 3, Thematic Paper One) both reflected and added to the strategic significance of the Sound. Increasingly in the second half of the nineteenth century most commercial and passenger vessels travelling from the Australian colonies towards British colonies in Asia and Africa and to Britain, coal bunkered in Princess Royal Harbour. Indeed most people who sailed to and from Britain in the second half of the century would have stopped at Albany. Not only was such shipping seen as a tempting prize for a possible enemy, the large store of coal could be invaluable to enemy ships.

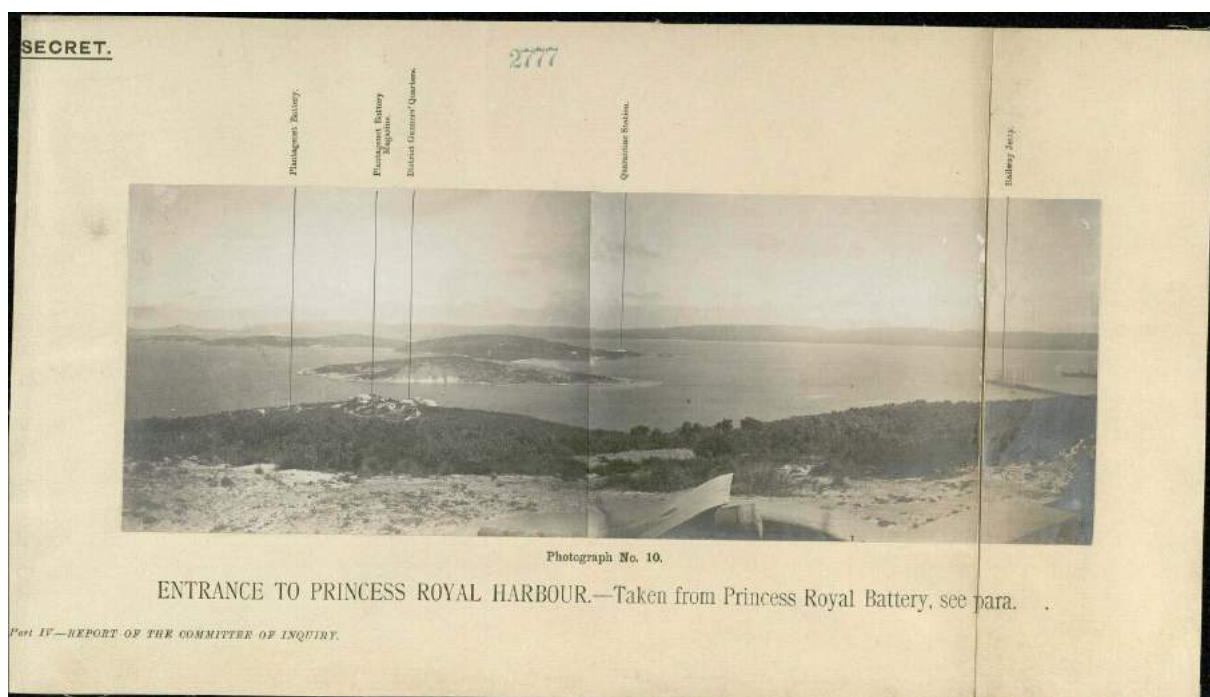
Nevertheless, talk of fortifying Albany was desultory, at least partly because the relentless ambition of the Perth government was to move the mail port to Fremantle. Eventually, in 1877 the British government had Mount Adelaide on the hilly peninsula between the town and the Sound, set aside for possible defence purposes. In due course the neighbouring hill, Mount Clarence, was also incorporated into the defence zone. Their commanding position over the Sound and the Harbour made them the logical place for fortifications. In 1878 Albany established a local militia force, the Albany Volunteers.

As elsewhere in Australia, the last two decades of the century saw mounting efforts to provide adequate protection at vulnerable points around the Australian coast, and Albany's significance was widely recognised throughout the colonies, not only locally. In 1884 the *Adelaide Observer* noted:

The weakest point in Australia is King George's Sound. To leave this magnificent harbour defenceless would... be a fatal mistake... The great bulk of Australian commerce traverses the Indian Ocean, and its way lies directly past King George's Sound... If the Sound were to be fortified by the colonies against attack it would be a centre of defence from which British and Australian Vessels could cruise to intercept any hostile cruiser. If it were allowed to remain undefended it would simply become the basis of a most formidable attack on our commerce and perhaps our cities.<sup>5</sup>

No such cooperation occurred on this occasion and the Albanians lived on the edge of their nerves during the Russian scare of 1885 until the Royal Navy sent two ships to be based temporarily at the port.

Albany continued to be a focal point of discussions between the colonies in the 1880s, during the early stage of negotiations about intercolonial cooperation that would lead eventually to federation. Because of shared concern about Albany's critical role in transport and communications for the colonies, there were various inspections, reports and intercolonial meetings that discussed fortification of the Harbour. In 1881 Sir Peter Scratchley proposed a comprehensive plan that was similar to those he designed elsewhere in the colonies, including guns at the heads, submarine mines at the entrance, gunboats, torpedo boats and an infantry force supported by a voluntary militia. As usual, the cost was a major obstacle and talk dragged on. An imperial conference in 1887 again discussed the need to fortify the Sound and Thursday Island, and the British offered to supply guns for a fort on Mount Adelaide on condition that the colonies pay for the construction and maintenance. When the offered guns were found to be obsolete muzzle-loading ones the colonies dismissed the offer as contemptible, so there was no progress.



In 1889 British military engineer Major General Edwards included a visit to Albany in his Australian tour to assess their defence capacities. His damning report on the state of colonial defences finally provided the stimulus to fortify the Sound. In November 1890 the military commanders from the

other colonies visited Albany and agreed to erect three six-inch batteries on parts of Mount Adelaide. Nearly all the colonial governments contributed to its erection and operation. The Victorian government undertook the construction and Mount Adelaide Fort and Princess Royal Battery, complete with gun emplacements, barracks and parade ground were built in 1891-93. They were originally garrisoned by a force from South Australia. Albany felt protected. This remarkable intercolonial cooperation is not well known or recognised and is of national significance as an early point in intercolonial cooperation that led to federation.

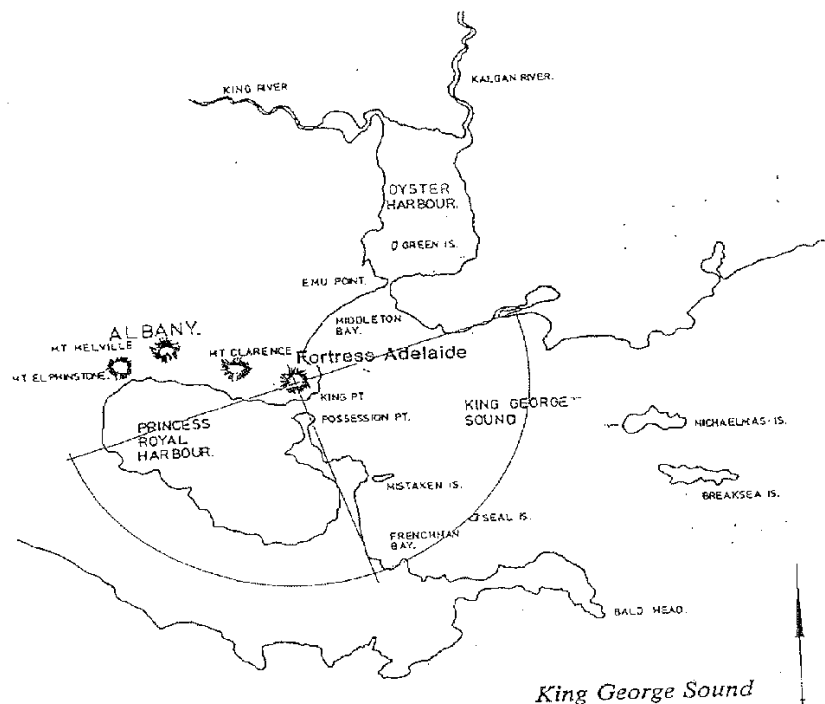


Figure 16. Map showing approximate range and arc of fire of the original guns installed in 1893. Source: Proposals for Conservation, Renovation, Development. Albany Barracks and Princess Royal Battery, Australian Coastal Defences, King George Sound WA, Town of Albany, 1986.

Nevertheless, like other coastal fortifications the guns were only used for tests and special occasions. During the next two decades they fell into disrepair and the garrison was wound down, especially after federation when the mail port was moved from Albany to Fremantle. The fort lost much of its significance and there was talk of closing it down, but it limped on and survived a 1910 inspection by Lord Kitchener. When war was declared in 1914, the Albany Volunteer Artillery quickly manned the fort.

Two events in the early years of the twentieth century demonstrated Albany's continued strategic importance. In 1908 the United States Great White Fleet insisted on visiting Albany as one of only three ports in Australia, after Sydney and Melbourne. Then, in October 1914 came one of Albany's proudest moments when the Sound and Harbour were chosen as the gathering and refuelling point for the thirty-six merchantmen and six warships that carried the first contingent of Australian and New Zealand troops to war; the first consolidation of Anzac forces. King George Sound continued to be a major gathering and refuelling point throughout WWI.

In 1925 a major secret report on British Empire defences including Australia was undertaken by the Committee of Imperial Defence. The report argued that 'in time of war Albany will be the most westerly and the principal Australian Convoy Assembly Point. Convoys may include all Australian and New Zealand traffic which normally use the Suez Canal, Panama Canal and Cape routes.'<sup>6</sup> Strikingly, Albany was listed as the most important Australian port in the table of priority for future defence significance.

In WWII King George Sound rose to prominence again when a variety of military, naval and air forces based in the area, including a base for Americans anti-submarine patrols.

Since 1945 the ongoing symbolic importance of the Sound for the nation has been demonstrated by the post WWII construction on Mounts Clarence and Adelaide of the ANZAC Desert Mounted Corps Memorial, a duplicate of the original statue erected in Suez in the 1930's, and the National Anzac Centre was also built there to mark the centenary of the initial gathering of the Anzacs and the start of WWI.

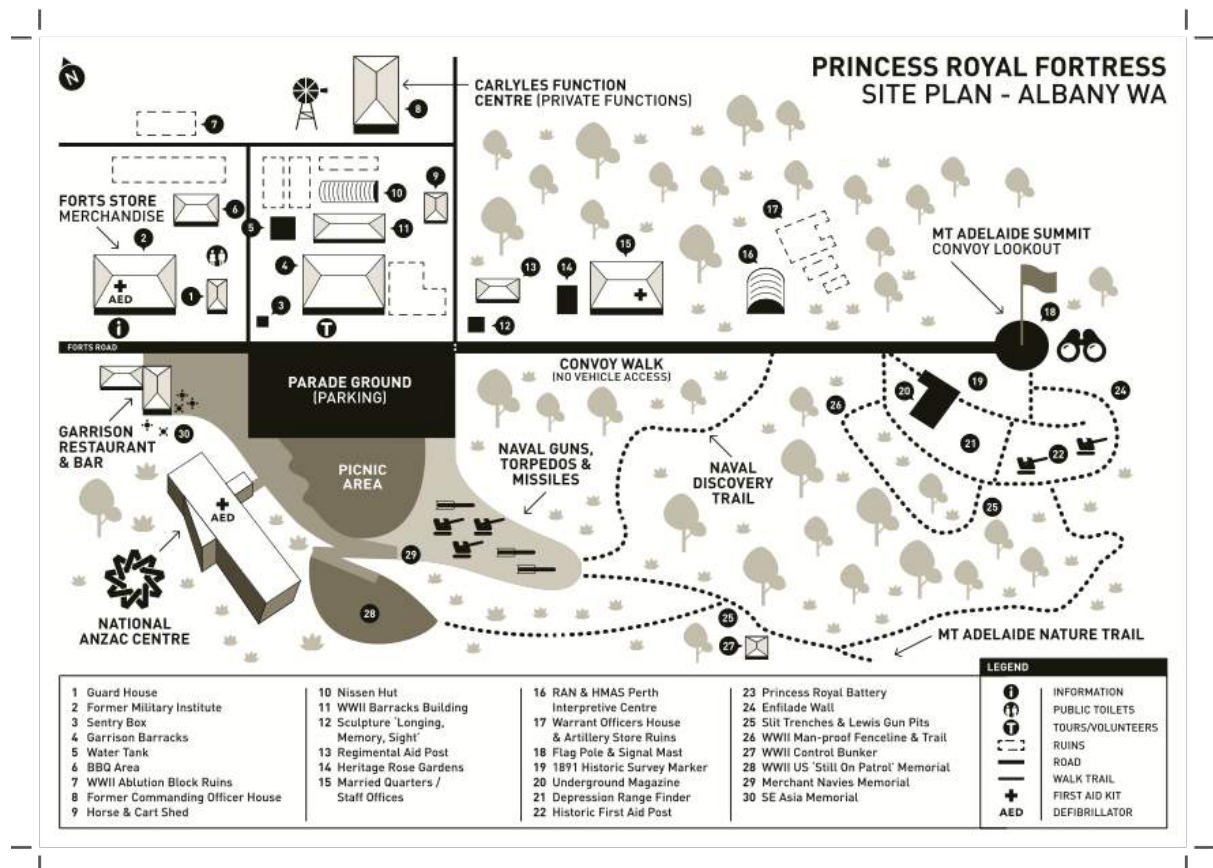


## CONDITION DESCRIPTION PRINCESS ROYAL FORT

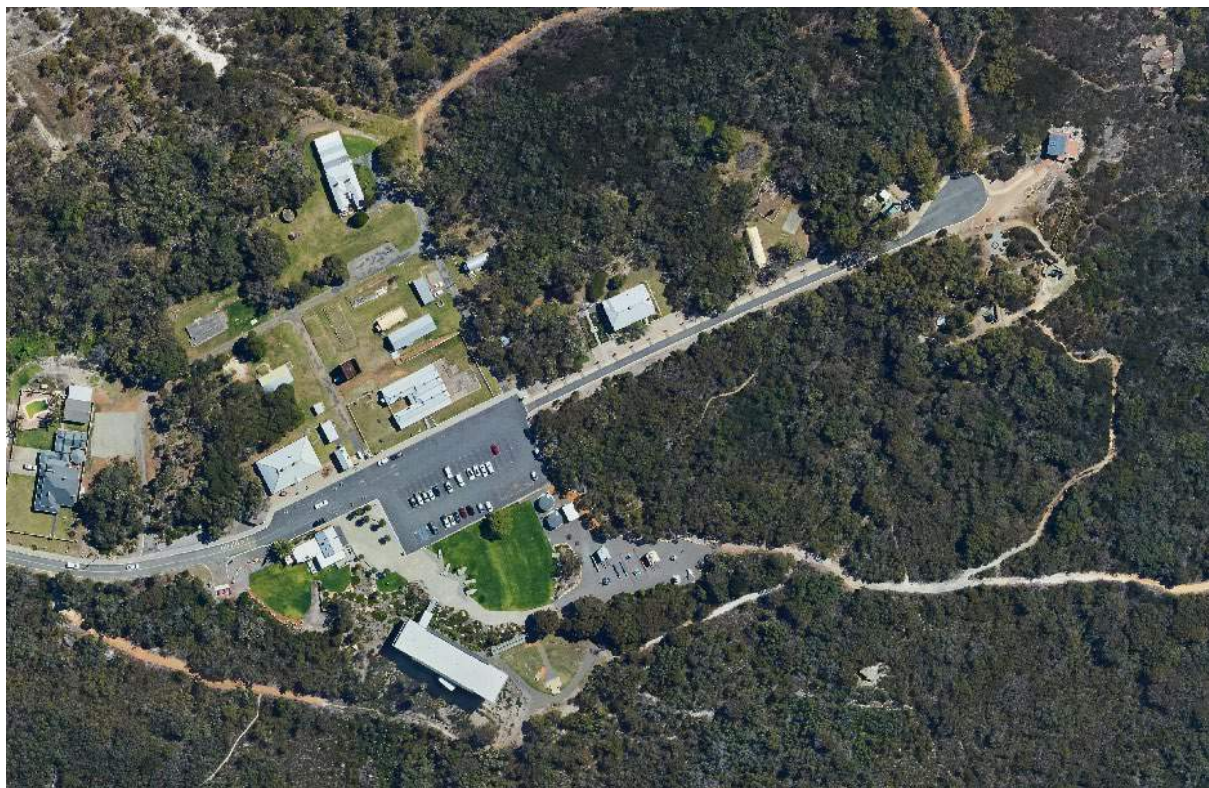
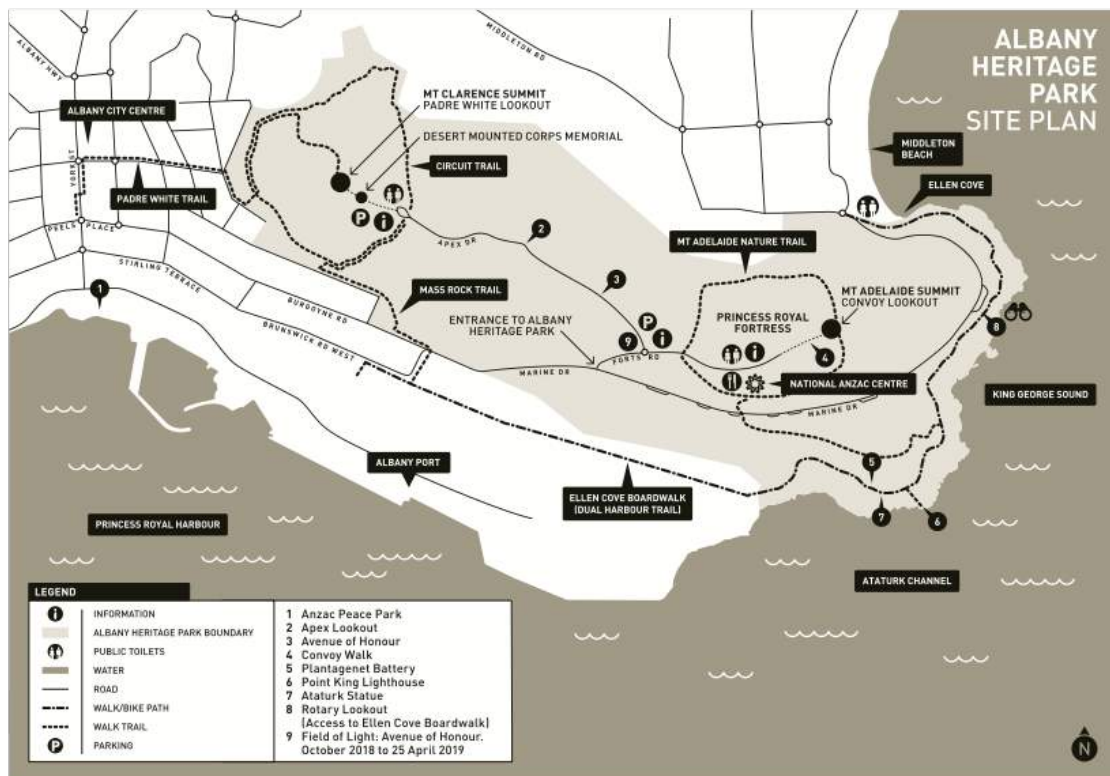
The Princess Royal Fort or Albany Forts complex is in much better condition than most of the other Australian coastal fortifications. This is partly due to the focus of attention on the area because it has been recognised its military and cultural heritage significance for the nation, which has seen, for example, the National Anzac Centre placed on the site.

It is also the cultural heritage importance this site to the City of Albany, and of the role of heritage tourism, has resulted in extensive restoration work to much of the fortifications.

The following images give an impression of the current condition, but the author has not been able to visit the site to prepare a more comprehensive description.

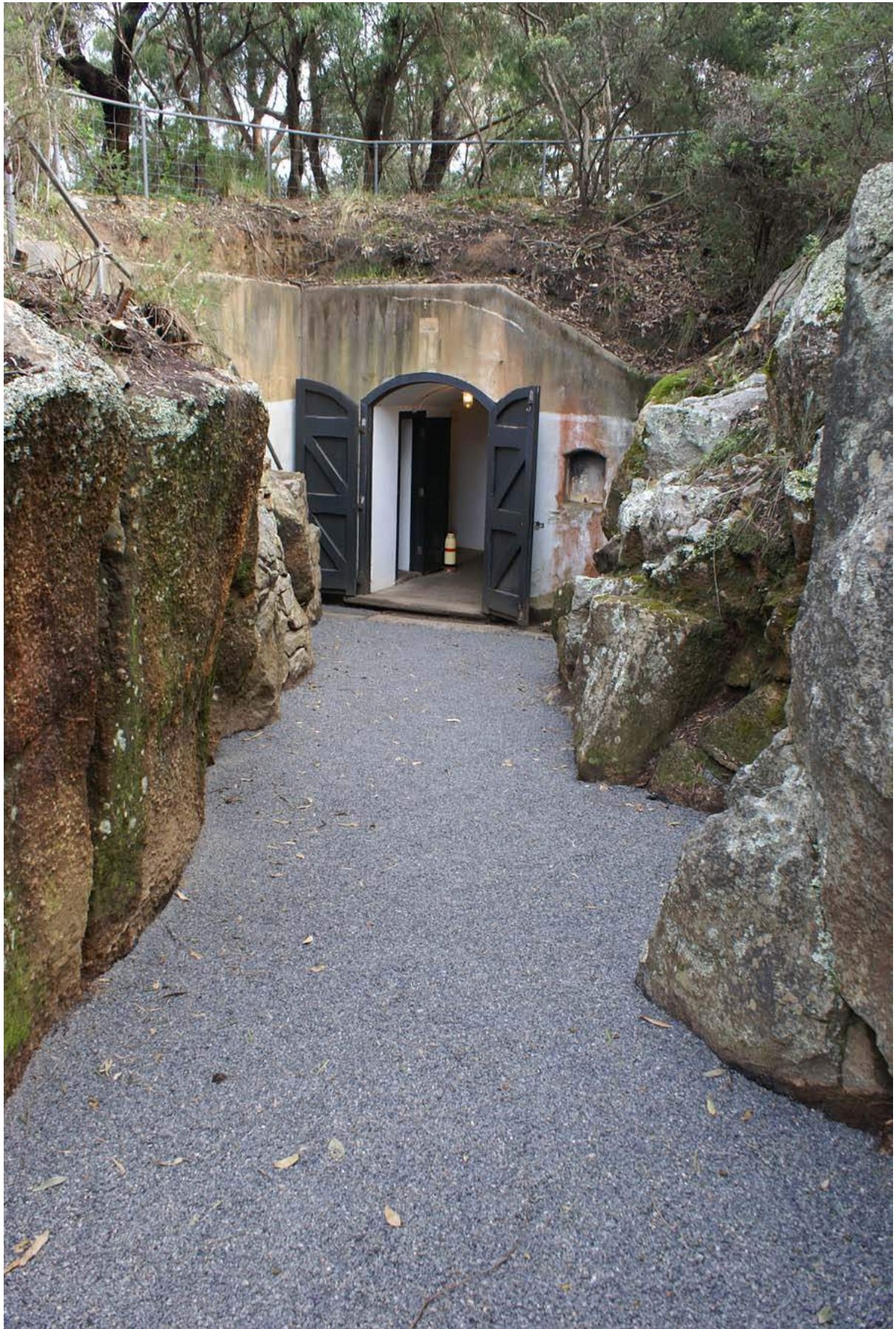
















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<sup>1</sup> Unless otherwise stated, this article is based on Garden, Donald S., *Albany: A Panorama of the Sound from 1827*, Nelson, 1977

<sup>2</sup> Dumont D'Urville, JSC, *An account in two volumes of two voyages to the South Seas*, MUP, 1987, Vol 1, pp. 37-38

<sup>3</sup> <http://adb.anu.edu.au/biography/mokare-13106>

<sup>4</sup> *Historical Records of Australia*, series 111, vol 6, p.490

<sup>5</sup> Cited in *Albany Mail*, 25 Sept 1886

<sup>6</sup> Quoted in Oppenheim, Peter, *The Fragile Forts: The fixed defences of Sydney Harbour 1788-1963*, Canberra, 2004, p. 207

## ADELAIDE'S COASTAL DEFENCES



Fort Glanville



Fort Largs

## EXISTING STATEMENTS OF SIGNIFICANCE

Fort Glanville and Fort Largs are on the **South Australian Heritage Register**, where their significance is listed as follows:

Fort Glanville is the earliest defence work of any consequence erected in South Australia and one of two 19th century forts built in the State. It was erected in order to allay fears that the Colony could be attacked by the Czarist Russian fleet. Begun in 1878, the fort was completed and the Battery fired for the first time in 1880. Together with Fort Largs (1884: registered place 10939), it formed part of an overall defence scheme to combat the perceived threat of foreign attack, particularly Russian. Fort Glanville remained a strategic defence installation until 1889 when Fort Largs received improved ordnance. Fort Glanville is also nationally significant for its association with Major General Sir WFD Jervois RE and Lt Colonel PH Scratchley RE, who were leading British defence experts who had a tremendous impact upon defence thinking throughout Australia in the latter part of the nineteenth century. When built Fort Glanville was considered to be a 'State-of-the-Art' coastal fortification and it retains a high degree of integrity, remaining as one of the least altered of all the Jervois/Scratchley designed forts in Australia. Fort Glanville also retains the original, and now rare, ordnance for which it was designed, unlike most other forts in Australia. (Derived from Fort Glanville Conservation Park Management Plan 1988)

Historically Fort Largs is important because it is an integral part of South Australia's early defence planning which began with the 1854 Finniss report. The subsequent perceived military threats to the young colony - mainly due to the British military engagements and colonization activities in the Pacific led the British defence experts Jervois and Scratchley to prepare a new defence strategy, the most tangible outcome of which was the building of Fort Glanville (begun 1878) and Fort Largs (begun 1883). On a national and international level, Fort Largs is important because of its association with the Imperial Army, particularly since Jervois and Scratchley were considered leading defence planners throughout the British Empire. Their work could also be found along the West Australian coast, at Port Jackson, Port Phillip Bay, Newcastle, Botany Bay, Brisbane, Hobart and Victoria Barracks. Architecturally Fort Largs is important because it represents the end of an era of coastal fortification philosophy - in terms of planning, design, and construction - spanning over three centuries. The integrity of Fort Largs is poor, because of the constant upgrading and other alterations relating to its continuous, active role as a military or para military complex. Nevertheless, most of the 19th century fabric remains, and all subsequent additions are well documented. (Condensed from L. Brasse 'Fort Largs Conservation Study' [1990])

The Fort Largs Barracks and Drill Hall buildings are of historic significance to South Australia as an illustration of a purpose built defensive barracks, erected in direct response to urgent Commonwealth and State mobilisation initiatives and coastal defence needs directly before the

Second World War. The Barracks and Drill Hall were built in 1939 as the nucleus of a reconstructed and strengthened Fort Largs - the only remaining coastal defensive battery site protecting the coast of Adelaide during the period. The Fort Largs buildings stand as places of importance within the military and political history of pre-Second World War South Australia and are in excellent condition and high in historic integrity. The position, functional layout, scale and architectural style of both buildings, within their open setting, clearly illustrate their intended purpose and the historic context of the Barracks in 1939.



# **ADELAIDE'S COASTAL DEFENCES**

**Kevin Jones**

Kevin Jones is Director of the South Australian Maritime Museum. He previously filled several curatorial roles at the Australian National Maritime Museum (1988 to 2000). Kevin studied Australian and Southeast Asian history at the Australian National University and museum studies at the University of Sydney. He is a past President of the Australian Maritime Museums Council and has served on committees for the Australian Association for Maritime History and the Australian Register of Historic Vessels. He is an honorary member of the Merchant Navy Association of South Australia. In May 2017 France's Ministry for Culture and Communication awarded Kevin Chevalier de l'Ordre des Arts et des Lettres, Knight of the Order of Arts and Letters.

## **ADELAIDE'S COASTAL DEFENCES**

South Australian Governor Sir William Jervois delivered a lecture in 1880 drawing on his military expertise. He began his explanation of the logic behind South Australia's coastal defences by first explaining his background in modernising England's coastal defences and pointing out that French naval bases such as Cherbourg were just 25 miles (40 km) across the English Channel.

Jervois referred to the experience of the American Civil War, when Confederate and the Union vessels attacked their enemies' ships in ports around the world. He then pointed to a map of the world showing British trade routes and challenged his audience, 'Your eye cannot rest on any portion of it', where British ships have not established business. They applauded when Jervois boasted that the total tonnage of ships entering and clearing British port in 1878 was 51,595,079 to a value of 800 million pounds sterling! <sup>1</sup> Jervois thought globally. He explained to his audience the need to build naval bases at Gibraltar, Malta, Aden, Hong Kong and Singapore. He brought his perspective to Adelaide by informing his audience that Great Britain had a trade of more than £40 million with the colonies of Australia.

It was a rational economic argument that defences were needed throughout the globe to protect British shipping and British ports. But Jervois went further, to end his lecture with a rousing call:

Whatever your relations to the mother country may be, it is essential to the assertion of your manliness, your self-respect, and your character as Britons, that you should bear the cost, the responsibility, and the honor of measures necessary for your defence.<sup>2</sup>

### **Previous Plans**

Jervois and Sir Peter Scratchley were not the first (in the late 1870s) to consider how South Australia could be defended. In 1854 Colonial Secretary Boyle Finniss led a commission which recommended that a line of signal stations should be built along the coast from Port Adelaide to Kangaroo Island to provide first notice of foreign warships. He recommended that a boom be built across the Port River to protect the Inner Harbor and that a volunteer militia should be formed. No action was taken on Finniss's proposals.

A commission in 1858 recommended building gun towers at Semaphore and Glenelg. A parliamentary report in 1861 recommended building forts at Glenelg, Semaphore and Torrens Island and connecting them with a military road along the coast. It also recommended building a

torpedo station and boom across the Port River. The proposals were approved, guns were purchased and a site at Semaphore was prepared but as work progressed the costs were reviewed and the project was abandoned.<sup>3</sup>

In April 1865 Commander George Parkin RN was asked to assess defences while he was visiting Adelaide. He reported that South Australia needed six gunboats, a light battery of horse artillery and two round towers with 100 pounder guns to protect Glenelg and Port Adelaide. In the following year Commodore William Wiseman RN, Commander of the Australia Station, recommended that Adelaide build three gun towers at Semaphore, at nearby Largs and at the entrance to the Port River.

Adolphe Bartels, a prominent Adelaide businessman, challenged the focus on fixed defences. He advocated the purchase of three steamships and he even offered to donate a substantial contribution towards their cost if the rest of the money could be raised by public subscription.

### **HMCS *Protector***

General William Jervois, then Director of Works for Fortifications, and Colonel Peter Scratchley, were commissioned early in 1877 to make recommendations for defending the Australian colonies.

At the time Jervois was Governor of the Straits Settlements (the Malay Peninsula) but by October he was appointed Governor of South Australia. So Jervois was the author of the report and he was also the Governor with responsibility for responding to its recommendations.

Jervois' chief recommendation was that the colony needed a warship. He wrote that Adelaide was particularly exposed to attack by sea, far more vulnerable than Sydney, Melbourne or Brisbane. Its shores were 'low, open sandy beach, on any point of which an enemy could land' and there was an abundance of good roads to take them to Adelaide. Further, 'Port Adelaide is entirely exposed to attack from seaward'. The coastline near Adelaide is sheltered by Gulf St Vincent and in the 1870s there were safe anchorages off Glenelg at Holdfast Bay, and at Semaphore and Largs, all offering easy road access to the city. 'I have no doubt that the best defence of Adelaide and its Port, as well as the commerce of South Australia, would be to provide a vessel of war superior in power to any hostile cruisers that would be likely to appear in these seas.' He envisaged the vessel stationed in a bay on the north of Kangaroo Island and linked by telegraph to Cape Borda.<sup>4</sup> Five years later South Australia followed Jervois' recommendations and signed a contract with William Armstrong and Company

of Newcastle on Tyne to commission a warship. Her Majesty's Colonial Ship *Protector* was 57 metres long and 9 metres in beam. It could sustain speeds of 14.5 knots with twin compound steam engines. HMCS *Protector* was the largest gunboat ordered by an Australian colony and reported to be the most formidable warship of its size. It bristled with arms, carrying an eight inch breech loading gun on its bow firing shells of 180 pounds to a range of 6.8 kilometres. It also carried two six inch guns on each side and one on the stern. Then, there were five Gatling guns and four Hotchkiss quick-firing cannon, and small arms including boarding pikes, cutlasses, rifles and revolvers.

Jervois' analysis of the coast was proved correct in February 1882 when three ships of the Imperial Russian Navy, the *Afrika*, *Vestnik* and *Plastoun*, arrived unannounced and anchored at Holdfast Bay. The ships were not hostile and the officers were welcomed and feted at a vice-regal ball and a picnic but their arrival did underline the vulnerability of the colony and questions were raised about the reasons for their visit.

HMCS *Protector* arrived in Port Adelaide on 30 September 1884 and served the colonial navy until Federation. It was stationed at the Largs Bay anchorage, near the entrance to the Port River estuary and Port Adelaide; not at Kangaroo Island as Jervois had recommended. The ship was never challenged to meet an adversary in South Australian waters. Its crew assisted in fighting occasional fires on the Port Adelaide waterfront, they helped lay a telegraph cable to Althorpe Island and after two major shipwrecks in 1888 the crew took responsibility for training a lifesaving service.

In a quirk of history and an affirmation of the colony's loyalty to the Empire, HMCS *Protector* was sent to China to support Britain's fleet crushing the Boxer Rebellion in August 1900.

After Federation, *Protector* was transferred to the Commonwealth Naval Force and from 1911 to the Royal Australian Navy. Its connections to Adelaide diminished as it was used as a training vessel for naval militia in New South Wales and Victoria as well as South Australia. In 1905 *Protector* collected the torpedo boat TB 191 from Hobart to be deployed in Port Adelaide at the North Arm Torpedo Station.

During the First World War, *Protector* served as a tender to the Australian submarines *AE1* and *AE2*, guarded the port of Rabaul in New Guinea, and conducted minesweeping patrols in Australia's coastal waters.

It was decommissioned from naval service in 1924 and used to transport wool and coal. At the end of a long working life in 1944 *Protector* was installed as a breakwater at Heron Island, on the Great Barrier Reef. It is now a largely intact hull and is protected by the Commonwealth Historic Shipwrecks Act 1976.

## **Fort Glanville and Fort Largs**

For Jervois, shore defences were important though secondary to the mobile defence provided by a warship.

As regards the defence of the capital of the Colony and its Port, it is desirable to guard against the chance of the war vessel not being on the spot at the required moment, and of some little time elapsing before she could arrive at the scene of the attack. It should, moreover, be observed, that local defences at the capital would render the war vessel more readily available for general defence.<sup>5</sup>

When Jervois planned fixed defences he focused on Semaphore and Port Adelaide's Inner Harbor. The Inner Harbor was the heart of shipping in the 19<sup>th</sup> century. It sat deep in the Port River estuary, 9.5 kilometres from the mouth and round a bend that turns 180 degrees. At the same time, it was only 1.5 kilometres overland from the coastal anchorage at Semaphore.

Sailing ships would anchor off Semaphore to await a tug to tow them to the Inner Harbor. Alternatively, they could make the voyage under their own sail but that could take two days – first using the south westerly winds that are predominant during the day to carry them into the river mouth, then waiting for a night-time change in the winds to carry them past the bend in the river south to the Inner Harbor.

A jetty had been built at Semaphore in 1860 to cross its shallow waters and aid ships to land passengers or drop the mails before they caught a tow to the Inner Harbor. A time ball tower was built there in 1875 so that officers could set their ships' chronometers. Even in the early 20<sup>th</sup> century some steamers would load their cargo in the Inner Harbor but collect some of their passengers from jetties at Semaphore or nearby Largs.

Jervois recommended that two batteries be built: one for three heavy guns of 18 tons weight on the sand hills near Semaphore and a second battery of two 12 ton guns three miles (4.8 km) to the north. Their arcs of fire were to cross over the waters off Semaphore to protect the anchorage and they would guard the approaches to the Port River estuary, and so protect access to Port Adelaide.

Jervois also recommended that the military road be extended to link the batteries at Largs and Semaphore and provide access for field guns and infantry from the batteries on LeFevre Peninsula to Marino, 29 kilometres along the coast.

Glenelg's Holdfast Bay was a significant omission from Jervois' plan. It had been an important anchorage since 1836 when HMS *Buffalo* anchored there and Governor Hindmarsh landed and proclaimed the Province of South Australia. It had been seen as a location for a battery in previous plans for defending the colony.

Jervois noted that the Peninsular and Steam Navigation Company landed steamers at a pier off Glenelg to receive their mails but he did not recommend shore defences for Glenelg. Presumably he saw the proposed warship as the solution for Glenelg and for the many other jetties he listed – at Brighton, Port Noarlunga, Willunga, Myponga, Normanville and Rapid Bay as well as many further along the coast including Port Lincoln, Port Elliot, Kingston and Robe.

## **Building the Forts**

Detailed plans for the two forts were drawn by South Australia's Engineer-in-Chief, Henry Mais, following a design by Major Scratchley. The two forts were complementary. In the report they were named as the north battery and the south battery and they were built to a common design.

The forts were built into the sand dunes behind the beaches. They were buried behind crescent-shaped earthworks of sand backed by 1.6 metres of concrete and 400,000 'best Melbourne hard bricks'.

The extended military road was built in sections between 1876 and 1885.

The principal guns were ten inch Armstrong rifled guns. They used charges of 130 pounds of powder to fire 400 pound shells. They were muzzle-loaded meaning the shells were loaded into the front of the gun. The *Register* newspaper described them as 'big mouthed monsters'. The shells were moved by lifting gear and the guns were 'disappearing'; that is, they could be cranked up over the parapet to fire and lowered to hide behind the wall. They could fire as far as 6014 metres!



Fort Glanville gun

The guns were crewed by volunteer artillerymen and the first practice shoot took place on 2 October 1880. The *Register's* reporter delighted in the occasion. He wrote of how well the volunteers acquitted themselves; that they were obviously well drilled, and he quipped about the need for local residents to put cotton wool into their ears. He also wrote of their esprit de corps and the 'honour of the gun'.

A target was moored 2300 metres off shore – a cask carrying a flag. Two crews fired 64 pounders and a 20 ton gun. The 20 ton gun hit the target on the fourth attempt. Sergeant Oswald's crew fired the sixty-four pounders and the reporter recorded every shot:

— first shot, 50 yards short; second, 50 yards over, but in good line; third, 50 yards short, not quite each good line; fourth, 50 yards over; fifth (case shot), good effect; sixth (shrapnel), about fifty yards short ; seventh, about 50 short; eighth, between 50 and 60 yards short; ninth, about the same, rather to left. <sup>6</sup>



Fort Glanville

After the practice there were drinks and speeches from Governor Jervois and the officers.

As history unfolded, the colonial forts never fired a shot in anger.

Following Federation, in 1903, the two forts were handed over to the new Commonwealth Department of Defence. New guns were installed at Fort Largs in 1910 and the magazines were redesigned to accommodate electric lifts. The Fort was crewed and fully operational during World War I and it did fire the odd warning shot before ships that failed to identify themselves.

Two of Fort Largs' Armstrong guns had been upgraded in 1889 and from that time it had been considered the more important of the two forts because it was closer to the entrance to the Port River and could also fire across the anchorage at Semaphore.



Fort Largs

Defence spending increased as tensions rose in Europe from 1935 and increased markedly after Japan invaded China in 1937. The size of the South Australian militia was doubled and new naval guns were imported from Britain for coastal defence, and ships and aircraft were ordered.



Fort Largs was then home to the 120<sup>th</sup> Heavy Battery of the Royal Australian Artillery equipped with two six-inch Mk VII guns. Emplacements in the fort were strengthened. Rangefinders and anti-aircraft guns were added and the garrison was increased.

In December 1941 everything changed. Australia was at war with Japan and the threat was closer to home. Fort Largs was now the sole coastal defence for Adelaide and it was exposed because it had been marked on maps for 60 years and was clearly visible from the air. So a new gun emplacement was built 600 metres north of Fort Largs; it was protected by sandbags and named Fort Malta.



Fort Largs

## **Torpedo Station**

Jervois' third recommendation was that a torpedo station be established on the Port River to guard the Inner Harbor. For much of its length the Port River is just 300 metres wide so it was far more easily defended than the approaches to the Port in seas off Semaphore and Largs Bay.

The torpedo station was built in 1885 on the site of an existing naval depot (dating from 1870s). It included a torpedo magazine built of stone and a corrugated iron building which was divided into a storeroom, workshop and torpedo room. A small cottage was home to a caretaker. A tramway linked the buildings to a jetty and the river was dredged to accommodate larger vessels.

When the torpedo station opened it was equipped with a range of defences including a six inch Armstrong breech-loading cannon; a submarine cable, electric contact mines that could be strung across the Port River and torpedos.

In July 1885 Governor Jervois, the Premier and several ministers spent an afternoon watching a demonstration of naval power in the Port River. They witnessed the starboard guns firing on HMCS *Protector* and then sailed to the torpedo station. A string of mines had been laid in the river ready for a demonstration but most failed to explode because they had been in the creek for a week and were waterlogged. It was a common problem. A demonstration of boom torpedoes was more impressive. The torpedos were rigged at the end of a long boom projecting from a boat. They exploded on contact with a floating target (a timber cask) and sent water eight metres into the air. The shock waves impressed the official party!

The torpedo station was not well supported. Two years after it opened a parliamentary enquiry found that the submarine cable was defective and the original ten Whitehead torpedoes that had been purchased from England were still in their original crates and the station did not have a vessel to fire them.<sup>7</sup> A torpedo boat did finally arrive in 1905. After the reorganisation of defences that followed Federation the second class torpedo boat TB *191* was secured from Tasmania.

The station was closed at the end of World War I. No buildings remain on the site but the Armstrong gun is in the collection of the Port Adelaide Historical Society and one of the mines produced by Adelaide manufacturer AA Simpson and Company is held by the SA Maritime Museum.

## Notes

1. HE Major General Sir WFD Jervois RE GCMB CB Governor of South Australia, Defences of Great Britain and Her Dependencies, A Lecture by HE Sir William Jervois, Adelaide 1880, p. 17
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4. Memorandum on Defences, Memorandum by His Excellency Colonel Sir WF Drummond Jervois RE KCMG CB, SA Parliamentary Papers No. 240 of 1877, Printed 12 December 1877 p. 4
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6. Our Defences: Opening of Fort Glanville, South Australian Register 4 October 1880 p. 6
7. Martin Wimmer, Archaeology of the Russian Scare: The Port Adelaide Torpedo Station, Flinders University Maritime Archaeology Monograph Series, Adelaide 2008 p. 45

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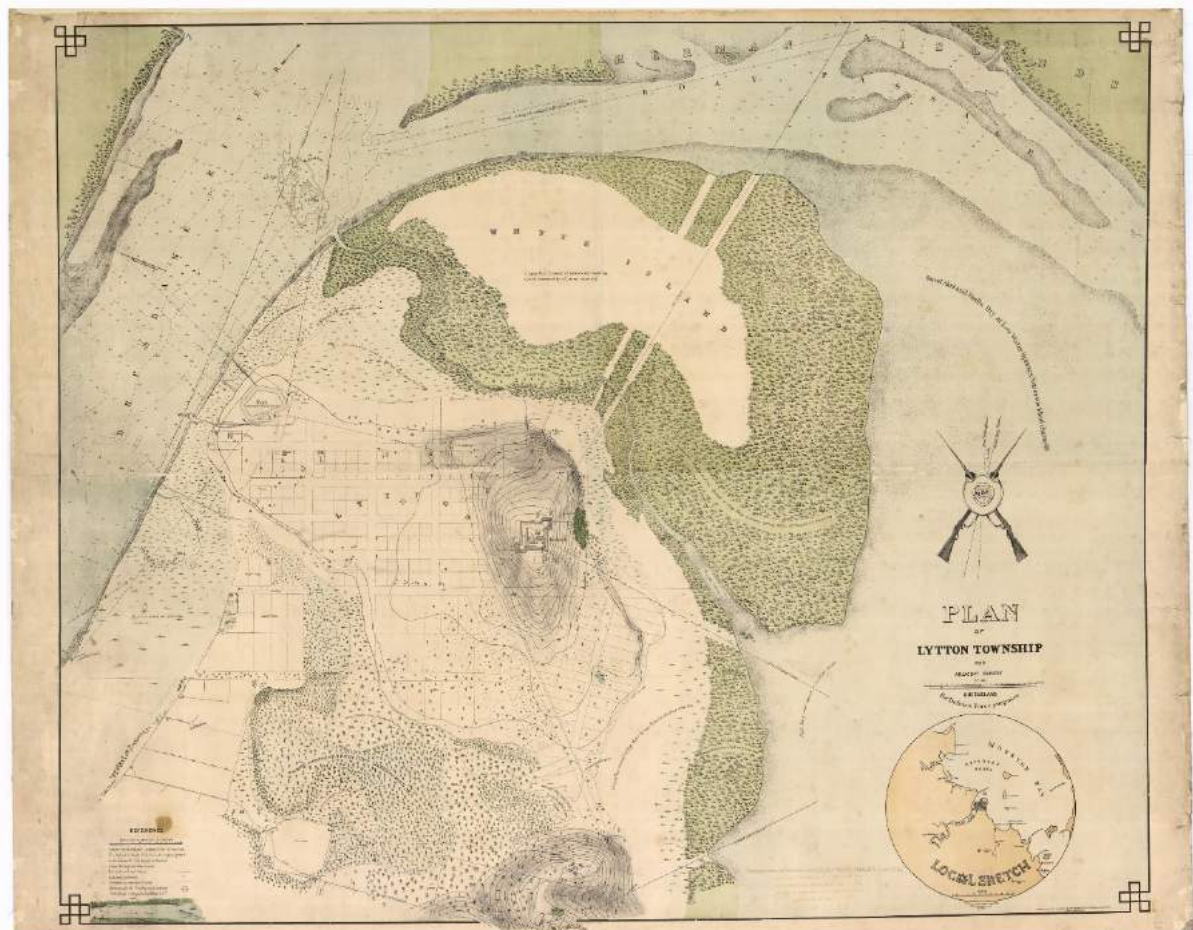
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## FORT LYTTON AND SIGNAL HILL

### BRISBANE RIVER



Plan of Lytton near the mouth of the Brisbane River. Fort Lytton is on the eastern side of the river, about midway down the map.

# Fort Lytton and Signal Hill

**Fort Lytton** has Queensland State Heritage Registration under the following criteria:

## **Criterion A**

The place is important in demonstrating the evolution or pattern of Queensland's history.

Fort Lytton, constructed 1880-82, is important in demonstrating the evolution of Queensland's history, being important evidence of the colony's response to providing for its own coastal defence needs following the withdrawal of Imperial garrisons in the 1860s. It is important for the intactness of the physical evidence of the 1870s defence scheme, and retains additions and alterations which illustrate the evolution of Queensland's defence planning and of military process and technology from the 1880s to the 1940s. The place is significantly nationally as part of the first co-ordinated system of coastal defence in Australia.

## **Criterion B**

The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

Fort Lytton provides rare surviving evidence of a late 19th century coastal fortification in Queensland, and is important in demonstrating the principal characteristics of its type, with moat, glacis and gun emplacements in situ.

## **Criterion D**

The place is important in demonstrating the principal characteristics of a particular class of cultural places.

Fort Lytton provides rare surviving evidence of a late 19th century coastal fortification in Queensland, and is important in demonstrating the principal characteristics of its type, with moat, glacis and gun emplacements in situ. It is important also in illustrating the principal characteristics of 20th century military activity, including Second World War adaptations to accommodate new facilities.

## **Criterion E**

The place is important because of its aesthetic significance.

The place evokes an aesthetic response, engendered by the desolate, denuded, artificial landscape of undulating earthworks and planted grasses, combined with the sense of ruin and remote setting at the mouth of the Brisbane River.

## **Criterion G**

The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

The fort has a strong association for Queenslanders as a symbol of defence and military activity in Brisbane and in Queensland. The former strong association with annual Easter encampments is now commemorated in the annual Easter displays at the fort.

### **Criterion H**

The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The place has a strong association with military activity in Queensland, as a site for defence, training and military support. In addition the place has a special association with the work of Col. Sir WFD Jervois, whose 1877 scheme for the defence of Queensland included recommendation that a fort be established at Lytton, and with the work of Lt-Col. PH Scratchley and Colonial Architect FDG Stanley, who, in the design and construction of Fort Lytton, implemented Jervois' ideas.

**Signal Hill** is listed on the Queensland Heritage Register as 'Lytton Hill', and is registered under the following criteria:

### **Criterion A**

The place is important in demonstrating the evolution or pattern of Queensland's history.

Lytton Hill is important in illustrating the evolution of Queensland's history, being:

- a significant communication and observation post at the mouth of the Brisbane River from c1860, illustrating the dependence of the Australian colonies on maritime trade and communications in the 19th century;
- associated with the early and rapid adoption of the electric telegraph in Queensland in the 1860s/1870s;
- a strategic and integral component of the 1880s military facility established at Lytton to defend the Brisbane River;
- associated with the conduct of a Boys Reformatory on the Hill from 1880 to 1899;
- associated with the activities of the Queensland militia from the early 1880s to the early 1930s and with Queensland preparation for participation in the South African War;
- the site of a military hospital during the First World War;
- the site of a strategic signals station during the Second World War;
- the site of the Control Tower for the Port of Brisbane in the late 20th century.

### **Criterion B**

The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.

The site has rarity value, not least for its layering of strategic communication, observation and defence roles for over 130 years. The 1873 former Telegraph Office is the only known surviving example of its age and type in Queensland, and is one of the earliest surviving purpose-designed

post and telegraph offices in the State. The surviving section of the Redoubt is a rare example of a defence fortification built in Queensland in the 1880s.

#### **Criterion C**

The place has potential to yield information that will contribute to an understanding of Queensland's history.

As an archaeological site, the hill has the potential to reveal traces of occupation from Separation until the present.

#### **Criterion D**

The place is important in demonstrating the principal characteristics of a particular class of cultural places.

The 1873 former Telegraph Office is the only known surviving example of its age and type in Queensland, and is one of the earliest surviving purpose-designed post and telegraph offices in the State.

#### **Criterion E**

The place is important because of its aesthetic significance.

The place has aesthetic value for its sense of dramatic isolation and ruin within the surrounding well-ordered oil refinery, and for the panoramic views both from and to the hill.

#### **Criterion G**

The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

The site is significant socially for its association with the development of military culture in Queensland from the 1880s to the 1930s; and as the site of the Reformatory where boys were educated and trained in Queensland in the last two decades of the 19th century.



## **Fort Lytton and Signal Hill**

Brian Rough

Historian and writer

Brian Rough has a strong interest in Australian military history and particularly in the military and naval forces of 19th century Queensland. He has had a long involvement with the promotion and conservation of Fort Lytton since its opening as a National Park in 1989. Brian is President of the Colonial Forces Study Group (Queensland) and Secretary of the Queensland Military Historical Society (Inc). Brian works as a freelance historian.

When separation from New South Wales occurred in late 1859 there was no military force to protect the coastline of the new colony of Queensland. A force composed of local men who voluntarily undertook regular military training was quickly established. Known as the Queensland Volunteer Force during its early years, it faced many challenges and did not immediately prosper. It was supplemented by British Army detachments between 1860 and 1869, before again being left to its own devices. Twelve obsolete 24-pounder muzzle-loading ships guns were supplied from England for the defence of Brisbane, and though volunteers were trained to serve them, the weapons were never emplaced in any defensive position and were lined up along the riverbank by the city's Botanical Gardens.

Founded in 1825 as a penal settlement for recidivist convicts, Brisbane was not sited on a harbour like many of the southern centres. Located 20 kilometres upstream from Moreton Bay, on a river which at times was barely navigable by large ships, Brisbane was in a unique position. Opened for free settlement from 1842, it did not begin to feel the benefits of increased immigration until after Separation. Secure in the belief of the supremacy of the Royal Navy, and with a large portion of its northern coastline shielded by an impenetrable coral reef, the various Queensland Governments of the 1860s and 1870s did not give much thought, and even less funding, to defence matters.

In the mid-1870s Queensland joined with the governments of New South Wales, Victoria and South Australia to seek a professional assessment of their respective defensive requirements. Approval was given in February 1877 for the loan of eminent military engineer Sir William Jervois of the Royal Engineers, who had already reported on the defences of the United Kingdom, Canada and India. He appointed Lieutenant Colonel Peter Scratchley, also of the Royal Engineers to aid his work. Sir William Jervois arrived in Queensland in the beginning of August 1877 accompanied by Lt-Colonel Scratchley, and inspected the towns and harbours of the colony. He forwarded the preliminary report of his findings to the Queensland Governor, Sir Arthur Kennedy at the end of the month.

Jervois considered construction of defences across Moreton Bay, but dismissed it for being a too expensive. He reported:

The defence of Brisbane against naval attack must be in the river by which the town is approached, and as the depth of water therein will only suffice at spring tides for vessels drawing 16 feet of water, it is only necessary to provide against the passage of unarmoured gun vessels.

The most favourable point of preventing the passage of an enemy is close to the township of Lytton, between which and Brisbane there is a good road, and where there is a good site for a land battery, whence both a raking and a cross fire can be directed upon hostile gun boats. I propose that three lines of ground torpedos shall be placed across the channel, and that an

earthen battery for two 80pr and two 64pr MLR guns may fire down and two across the river. It should be an earthwork, rendered secure against assault by a ditch and stockade, and provided, in as inexpensive a manner as possible, with the necessary accessories for the cover of the men, ammunition, and stores and for the effective working of the guns. In the construction of the battery, care should be taken to defilade it from the adjacent hill, on which there is a telegraph station. This hill would be an excellent point whence to watch the movements of an enemy in Moreton Bay.<sup>1</sup>

Scratchley, who had constructed earlier fortifications for Melbourne and reported on the defence of South Australia, duly pushed the Queensland Government for the adoption of this defence scheme, which also involved the reorganisation of the colony's volunteer forces. The Queensland Government were again reluctant to financially commit to the task, but did begin to place orders for submarine mines, heavy artillery and modern infantry weapons. It may have been the Russian war scare of mid-1878 that finally galvanised them.

£10,000 was allocated for construction of a battery at Lytton to protect the submarine mines. The low-lying township of Lytton near the mouth of the river had been confirmed by Scratchley as the best defensive position. Its design was pentagonal in shape surrounded by a wet ditch or moat, making it a unique defence facility in the Australian colonies. Construction work on the battery began in 1880. Aware the Government was frugal, Scratchley recommended that some of the work could be undertaken by Reformatory boys, who were held on a hulk near the water police station at Lytton. The boys, aged from 7 to 14 years, were transferred to new buildings on Signal Hill, which Jervois had suggested would need to form part of the defences. Despite their age and lack of physical maturity, the Reformatory boys were put to work clearing the mangroves in front of the battery, and generally providing free manual labour. Their relationship with the defence facility continued for almost two decades.

The majority of the construction of what was to become known as Fort Lytton, was undertaken by contractors under the direct supervision of the Queensland government architect. It was occasionally inspected by Scratchley who in November 1881 noted:

I found the works at the battery well executed, the materials employed good, and all the details carried out in accordance with my designs. Although the progress has been somewhat slow, I consider the delay a decided advantage, as it has given time for the consolidation of the parapets and the setting and drying of the masses of concrete and brickwork.<sup>2</sup>

Two 6-inch Armstrong mechanical loading RML guns were placed in the right face of the battery, and two 64-pounder RML guns on garrison sliding carriages were placed in the left face, though it was mid 1882 before it could be said to be operational. A caretaker resided in the battery at Lytton

from 1883, with the responsibility for the guns and magazines. As there were no other troops permanently on site, the parade ground and parapets were kept in order by the Reformatory boys, who were also given responsibility for digging a redoubt around their reformatory buildings on the hill.

It was 1885 before the local military achieved the beginnings of a professional edge. The Volunteers were re-organised across the colony as the Queensland Defence Force. At its heart was a small full-time force that manned fortifications and provided training and instruction for all others, a large partially paid militia force, and a small force of volunteers who gave their service without remuneration. Another war scare in 1885 prompted the completion of most of the Jervois-Scratchley recommendations, including an engine room to power electric search lights to illuminate the river at night.

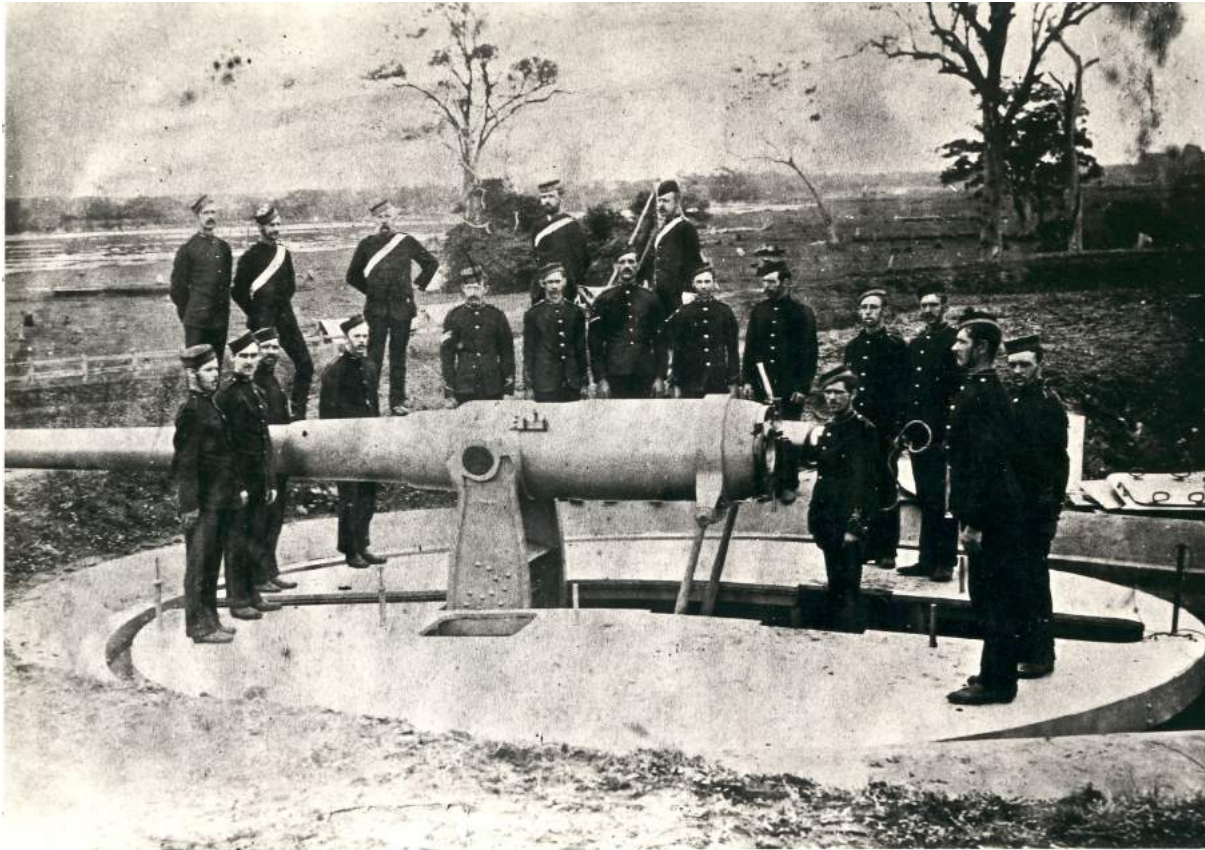
For the remainder of the century improvements were made to meet the rapid advances in military technology. The original two six-inch guns, which had not been reliable, were sent back to England to be converted to breech-loaders, after they were replaced by 5 ton 6-inch breech-loading guns on hydro-pneumatic carriages during 1887-88. Substantial bomb-proof casemates for the gun detachments were built to the rear of the hydro-pneumatic guns. As a result of an inspection by Major-General Edwards RE in June 1889, plans were made to replace the 64-pounder RML guns with modern six-pounder quick-fire Hotchkiss guns. A test room and observation firing room for the submarine mines were completed by 1893, by which time the Hotchkiss guns were emplaced and the 64-pounders were moved to an auxiliary position closer to the river. A Watkins range-finder, connected by telephone to the fort's guns, allowed the introduction of Group Fire at the same time.

In 1895 the Local Defence Committee reviewed the significance of the Fort, concluding:

Though it is very improbable that an enemy would venture to raid it by advancing up the river, yet the permanent defences have a strong moral effect, both in making such an attempt all the more improbable, and in preventing panic and loss of confidence in the capital, when war seems probable or is declared.

Further considering its position as to the nearest hostile base (Noumea, only 780 miles away), and that it is not protected by the Barrier Reef, a dash for hostile landing in its vicinity seems not beyond the range of reasonable probability, if adequate military forces are not maintained.<sup>3</sup>

Despite these conclusions, the two 5-ton six-inch breech-loading guns were dismounted from the fort in 1895 and sent to England for chase-hooping. They were returned and mounted during the course of 1897, one of the last upgrades of the 19<sup>th</sup> century.



Gunnery practice 1890s

The Queensland Government's commitment to the war in South Africa in 1899, brought about the reconsideration of the effectiveness of the Lytton defences. The Commandant attempted to make the most of the situation and in his 1899-1900 report, requested a number of new buildings at Lytton. These included a new powder magazine, a wet gun cotton magazine, additional stores and workshops for the submarine miners. A permanent searchlight emplacement was also required. As the Lytton works were initially constructed for the defence of the submarine mine fields, the government was afraid that the continued dredging of the Brisbane River to make it navigable by ships of considerable draught might alter the ability of the defence system to cope with the armaments of any possible enemy vessels. The Colonial Defence Committee in Britain considered the matter in late 1900, based on information continually fed to them by the colonial government, and concluded:

...that the gun defence of the Brisbane River is sufficient to deal with any naval attack that is likely to be attempted. If such an attack were contemplated, in spite of the distance of Brisbane from the sea and the intricacies of the navigation of the river, the prospect of engaging the two 6-inch B.L. guns at Lytton Battery would render the enterprise so hazardous as to remove it from the category of forms of attack which are reasonably probable.<sup>4</sup>

The Queenslanders' contingents to the war in South African war were enrolled, organised, drilled and equipped at Meeandah, the Exhibition Grounds and Lytton. 165 officers and 2785 other ranks, and over 3,000 horses were despatched from Queensland during the period 1899 to 1902, the greater portion having gone under canvas on the slopes of Reformatory Hill. The preparations for the war saw the longest continual use of the Lytton defensive positions since they were constructed, some 20 years earlier.



Lord Kitchener visiting Fort Lytton in 1910

After Federation, the Commonwealth of Australia officially took over the Defences of the individual state forces in March 1901, though it was more than a year later before they began to assume effective control. Based on the report of the Colonial Defence Committee, the new Commonwealth could have considered it had inherited a fortification which stood the test of time and continued to fulfil its role in defending the river access to the commercial capital of Queensland. The continual updating of weaponry which occurred at Lytton had guaranteed that the defences were adequate to meet challenges issued during the early years of the twentieth century. The Boy's Reformatory was removed from the adjacent hill, though there was no attempt to fortify the site any further. The major change in that period of time was the abandonment of static submarine minefields, and the defence of the river reverted solely to the guns of the fort, the 6-inch hydro-pneumatic disappearing guns. This situation continued throughout World War I, during which the fort fired its first and only shot in anger at four local fishermen in a motor boat. At the end of WWI soldiers returning from the

war during the outbreak of Spanish Influenza were held under armed guard in strict quarantine at the adjacent Quarantine Station.



Fort Lytton c1930s

Just prior to World War II major changes were made to the role Fort Lytton served in the defence of Brisbane and Moreton Bay. The fort became a designated Inner Examination Battery on the Brisbane River while fortifications on Bribie Island and at Cowan Cowan formed the Outer Examination Battery. The 6-inch hydro-pneumatic disappearing guns, which had been installed in 1888 and remained in service throughout World War I and the interwar years, fired their last shot at Easter 1938, after which they were dismantled, and the fort effectively mothballed.

The outbreak of the European war in 1939 did not see significant changes to Lytton's role. It was not until Japan entered the war and the subsequent establishment of bases in Brisbane for the United States forces that Lytton became a close defence fortification. Fort Lytton, including the nearby Hill with its colonial era redoubt, was again garrisoned. Re-named Signal Hill after the Reformatory was removed, in the war's early years it became the Brisbane Area's Fortress Signal training camp. Initially the old telegraph station building was used. This building was extended, and the Fortress Signal camp had a telephone line connected to the Headquarters of Brisbane Fortress Command.



Lytton was re-armed when it was considered that some defences were necessary to protect the South Passage Bar and the mouth of the Brisbane River from small enemy vessels. In 1941 an 1890's 4.7-inch naval gun was sited in the gun position closest to the river, and a timber and concrete canopy was erected over it. It remained in service until the end of the war. A searchlight emplacement was also constructed at the fort, its purpose to allow illumination of shipping in Moreton Bay, and vessels entering the river. The Lytton Heavy Battery was established in December 1941, at which time the fort came under the command of Brisbane Fixed Defences.

Following the Japanese bombing of Pearl Harbour in December 1941 home defence became a major preoccupation in Brisbane. The arrival of the *Pensacola* convoy which had been *en route* to the Philippines heralded great changes to the city. Following the air raid on Darwin in February 1942, it was believed Brisbane as the state capital and with the best port facilities in Queensland, might become an air-raid target of Japanese. Between March and July 1942 the Japanese conducted regular reconnaissance missions over Cairns and Townsville using long range twin-engine aircraft. Townsville was actually bombed three times in late July and the town of Mossman once. While the Japanese were able to penetrate Australia's defences on these occasions, the Battle of the Coral Sea in May 1942 prevented Japan from launching carrier-based raids along the Queensland coast.

In July 1942, the General Headquarters of the Allied South West Pacific Area command, under US General Douglas MacArthur, moved from Melbourne to Brisbane. As a result, supporting infrastructure grew within the city and surrounding suburbs, swelling the population with the influx of thousands of US forces and the returning Australian forces from the Middle East. Large military camps were erected, medical facilities, supply depots, airfields, training establishments and scientific research sites were also built, requisitioned or adapted.

The Fort Lytton Inner Examination Battery was expanded to include anti-submarine nets installed across the river from Bulwer Island. It was linked by the boom defence vessel HMAS Kinchela which was permanently moored mid-river, to the southern bank's Royal Australian Navy (RAN) Station No. 8 Lytton, a shore winch station. The boom gate ran from the south bank of the river, and when opened by a winch house at Fort Lytton, swung towards the south bank. When a ship entered the river, Kinchela lowered the net to the floor of the river. At the same time, Fort Lytton's coastal guns were manned, as was a .303 Vickers machine gun post on Bulwer Island. It took approximately 20 minutes to open the boom to allow ships to enter the Brisbane River.



The 6th Australian Heavy Anti-Aircraft battery (6 HAA Group) was established to monitor and prevent enemy aircraft entering Brisbane airspace and using the Brisbane River as a navigational aid. The anti-aircraft batteries were to provide protection for nearby Australian and US naval facilities located along the river. The 6 HAA Group was a collection of eight 'A class' positions containing four 3.7-inch static anti-aircraft guns, magazines and a centrally located, semi-underground command post and plotting room. Of these the [385] group was emplaced adjacent to the fort, in what was part of the Lytton defence reserve. From mid 1943 troops consisted of regular Army and Volunteer Defence Corps (VDC) personnel. The VDC also manned mobile light anti-aircraft Bofors guns. The Australian Women's Army Service (AWAS) was also involved in operations such as range finding and spotting. At the end of the construction project of the heavy anti-aircraft battery, it was realised that there was no suitable accommodation available on site for the battery gun crews. Additional structures including a kitchen and mess for 75 all ranks, administration building and stores, a sleeping hut for 45 AWAS, and latrines, baths and laundry for women, and showers for men, were all erected on site.

In 1944 as the war advanced further to the north, personnel on the battery had diminished to a care and maintenance role, and it was largely used for training purposes. By January 1945 385 Australian Heavy AA troop at Lytton was disbanded, and by August all HAA sites in Brisbane were disarmed and abandoned.

The RAAF formed 23rd Radar Station at Signal Hill in June 1942. It was a Fixed Radar Station, one of the first installations in Australia, and equipped with a British Mk V COL set that had originally been destined for Singapore. Once established the RAAF personnel were replaced by operators from the Women's Auxillary Australian Air Force (WAAAF), who were billeted in nearby Wynnum. The Radar Station was also used as a training facility during the war, and ceased operations in January 1945.

The RAN, US Navy, and later Royal Navy all operated submarines from the Brisbane River, and concerns that bases might be subject to attack by fast-moving torpedo boats or submarines, led to the construction of a twin 6-pounder 10cwt quick-firing gun and an elevated fire control post on the front face of the fort. Construction commenced in August 1943 and was completed by May 1944. It involved cutting through the berm into an empty disappearing gun pit to allow access to the new gun. The old gun floor of the emplacement was filled so that it could be converted into a shelter for the crew of the twin six-pounder, who stood-to at any opening of the boom gate day or night.

The 1st Heavy Training battery moved to Lytton in May 1943, to train personnel for heavy artillery batteries armed with the US 155mm M1917/M1918 field guns. Personnel from the VDC began training on the twin 6-pounders and the 155mm guns from September 1944. As the war moved further from Australia and the danger receded, the number of regular army artillerymen at the site was reduced, and the VDC gradually assumed responsibility for manning the fortifications.

Fort Lytton's role as a defensive facility ceased in 1946 when all fixed coastal defensive positions in Australia were decommissioned, but military authorities maintained Fort Lytton as a communications base until the 1950s. In the early 1960s the land was acquired for the establishment of an oil refinery, but many structures at the Fort and Signal Hill survived. Signal Hill and the anti-aircraft positions have survived within the refinery grounds, and the land surrounding the Fort was acquired by the Queensland Government. Today, as Fort Lytton National Park, the site is a valuable surviving feature of Queensland's military heritage and is a significant element in the development of Australia's national defences.



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<sup>2</sup> Queensland Volunteer Force. Report of the Military Committee of Inquiry. QPP, 1882

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# THE DEFENCES OF HOBART AND THE DERWENT RIVER

1803-1903



## **EXISTING STATEMENTS OF SIGNIFICANCE**

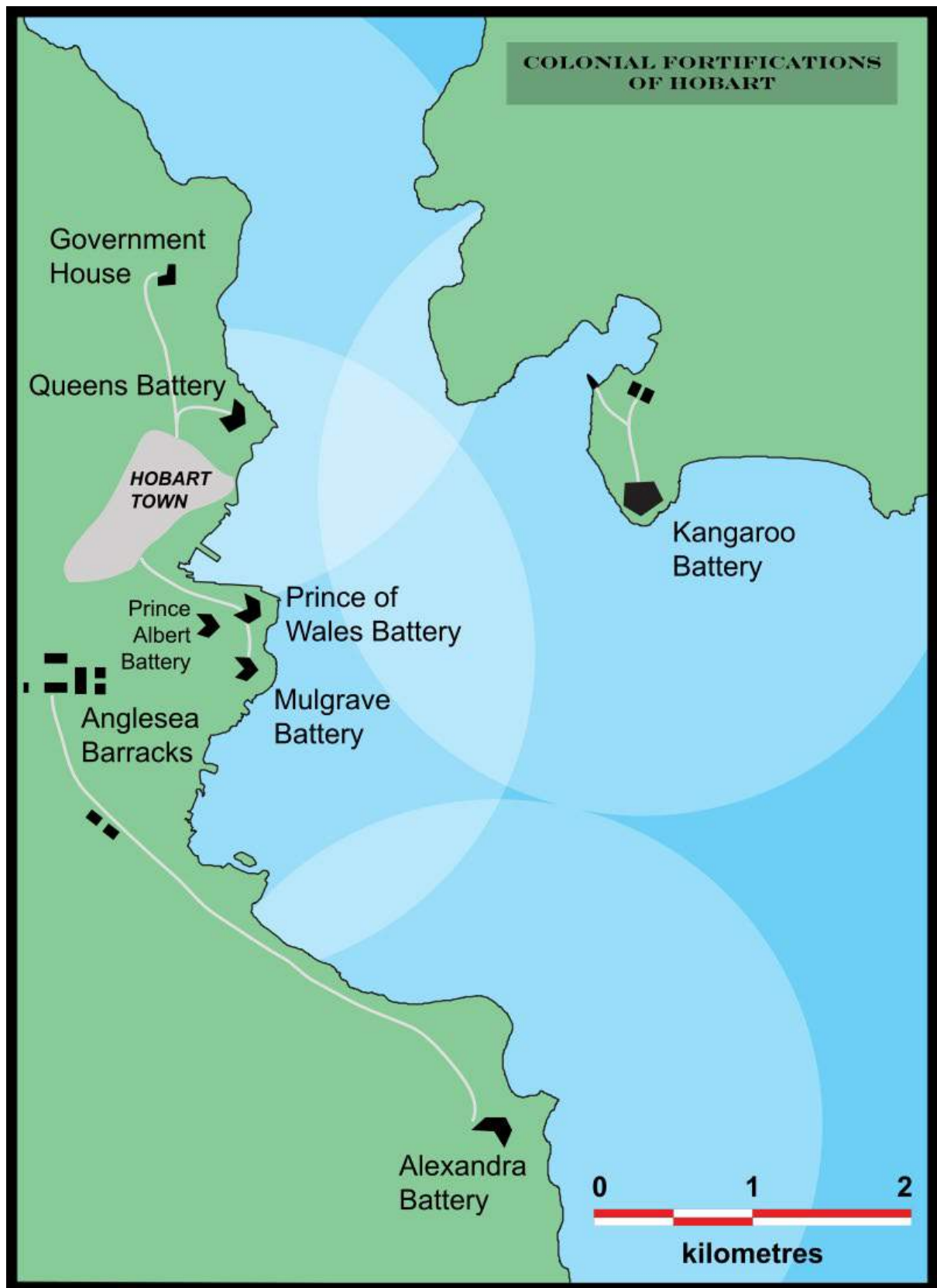
A number of battery sites were established in the defence of Hobart along the shores of the Derwent River in the nineteenth century, some of which are now registered. However, gaining access to the Statements of Significance is opaque.

The following sites are listed but not detailed on the Tasmanian Heritage Register

Mulgrave Battery

Kangaroo Bluff Battery

Alexandra Battery



# **THE DEFENCES OF HOBART AND THE DERWENT RIVER, 1803-1903**

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The defences of Hobart developed over the course of the nineteenth century, from a small earthen battery to three substantial batteries in 1885 with long range capabilities ringed around the River Derwent. The system was built in fits and starts, dependent upon both the local and imperial anxieties of the moment, the skills and capabilities of those on the ground, and the availability of funds. The Derwent estuary was one of the best harbours in the Southern Hemisphere – deep and sheltered from the prevailing westerlies of the ‘Roaring Forties’, but close enough that ships under sail could easily pick them up. This favourable geographical position meant that the penal colony early on became a transnational hub of shipping activity – and therefore a source of constant anxiety for those concerned about privateers and foreign hostile powers. These fears of external threats were always relational to internal threats (real and perceived). These factors combined in a pattern of progress and pause, and the final shape of the coastal batteries that ringed the River Derwent illustrate these local and global tensions in the defence history of this southern outpost of the British Empire.

### **Early Years at Battery Point: 1803-1836**

Hobart’s first earthen battery was constructed soon after the British outpost was established at Risdon Cove on the eastern shore of the Derwent River in 1803. The colony was established in part to forestall French incursions in the South Pacific, on the doorstep of the fledgling Botany Bay colony. Soon after, as the colony shifted to Sullivan’s Cove on the western side of the river, this early earthen structure was replaced with ship’s guns mounted on a wooden platform on the beach below the old Government House (located at modern day Franklin Square) to deter French incursions. These guns, taken from HMS *Investigator* were later augmented by two 12-pounders and two 6-pounders, all of which had an extremely limited range. Lindy Scripps, in her historical context study of the history of Queen’s Battery and Alexandra Battery, identified (a probably apocryphal) story about an ex-whaler who built his house in Macquarie Street with a flat roof and battlements, for ‘if the French should appear, he would give a good account of himself, even if the government did not’.<sup>1</sup>

When Lt Governor William Sorell arrived in Hobart in 1817, he found the town virtually defenceless and called for the construction of a battery on Knopwood’s Point (Battery Point). This installation (named Mulgrave Battery after the Earl of Mulgrave, the Master-General of the Ordnance) was completed in August 1818 and received the old ship’s guns from the platform at Government House. It was described by a contemporary as ‘A poor pitiful mud fort with half a dozen old honeycombed guns which ... serve to make a great noise on the King’s birthday and on one or two other public



occasions in the course of the year'.<sup>2</sup> The soldiers who were responsible for firing the guns (none of whom were trained artillery men) also seem to have been largely unaware of even these ceremonial protocols. When the Russian round-the-world expedition under the command of Mikhail Petrovich Lazarev called at Hobart in 1823, the midshipman on the *Kreiser*, Dmitrii Ivanovich Zavalishin, recorded in his journal:



Figure 1: Mulgrave Battery, Battery Point, Hobart, c. 1880. Courtesy Allport Library and Museum of Fine Arts, State Library of Tasmania

... One can easily imagine what an impression was bound to be made by the appearance of two Russian warships in so young and small a colony.... The whole colony literally moved into action, showing us... an unusual respect.... the proud Briton expressed his good-will and respect for us by disregarding custom and firing a salute first.... The battery fired eleven shots, which was then reckoned to be an appropriate salute for an admiral's flag.<sup>3</sup>

The Mulgrave Battery was twinned with the developing communication infrastructure of the young penal colony – specifically, the Signal Station and Signal House, which were completed in 1831. The signal house still stands, and is one of the oldest buildings in Tasmania. The signal station was used for controlling shipping in the estuary, and it also relayed communications from penal stations on the Tasman peninsula and communicated with the Mount Nelson signal station, high in the hills above the capital.<sup>4</sup>

The signal station at Mulgrave Battery speaks to the principal concern with internal threats and the development of commerce during this early period of Tasmania's history. Sorell was deeply concerned with a campaign against bushrangers, while his successor Governor George Arthur presided over a military and paramilitary campaign against the Tasmanian Aborigines (the 'Black War' of 1824-1831), and a comprehensive system of surveillance and control over the growing convict population, in addition to the massive growth of white settlement and the expansion of

commerce.<sup>5</sup> Paradoxically, the construction of batteries languished during the period of Tasmania's history most characterized by violence, surveillance, expansion, and commercial prosperity.

### **Well-Laid Plans, Privateers, Progress and Pause: Drawing Up the Derwent's Defences, 1837-1877**

It was during the 1820s and 1830s that Hobart became a well-established stopping point on a busy global circuit of commerce. Ships from the Cape, Mauritius, and India would stop here *en route* to Valparaiso. It was



*Figure 2: Queen's Battery, Domain, circa 1900. Courtesy W.L. Crowther Library, State Library of Tasmania*

a good place to reprovision and to refit – especially for whalers from the US and Britain plying the southern oceans and the Pacific in search of sperm and right whales. As Governor Arthur put it in 1827, 'Situated midway between the continent of India and South America, [Hobart] must become the Alexandria of these seas'.<sup>6</sup>

This very prosperity (combined with a large mass of unfree labour) seemed to make Hobart a ripe target for a privateer – a fact almost universally acknowledged by the population and a threat that would never evaporate over the course of the nineteenth century. In 1837, The editor in *Bent's News and Tasmanian Register* wrote (prompted by a smallpox epidemic):

[It] cannot be denied, but that the smallest vessel of war in the British or any foreign service could, without the least opposition, be stationed bang in front of Government-house, and compel the people to submit to any terms. ... It would be beyond a joke to find a levy of some five thousand dollars made by a paltry sneaking privateer, and yet this is an event quite as likely to occur, as is the introduction of the small-pox.<sup>7</sup>

It was as a result of these fears that the foundations of the fortification system around the River Derwent were laid, though it would take nearly half a century for them to be fully realized. Major Roger Kelsall of the Royal Engineers arrived in Hobart in 1835, and was struck by the defencelessness of the bustling port. He drew up a plan for five heavily armed batteries that would surround the

entire anchorage of the Derwent, in order to defend 'the Harbour and commercial property of Hobart Town against not only an attack by a small Naval Force but even against the privateering incursions of single ships'.<sup>8</sup> Kelsall recommended that Mulgrave Battery be upgraded and armed with sixteen 32-pounders and 4 bomb guns, and that new installations should be built at Macquarie Point (twenty 32-pounders and four bomb guns), Kangaroo Point on the Eastern Shore with ten 32-pounders and two bomb guns, and the remaining two installations at Sandy Bay (western shore) and Bellerive Point (eastern shore) to be equipped with field pieces. To provide temporary protection for the town and the harbour, Kelsall called for twelve 32-pounder guns to be installed at Mulgrave Battery, Macquarie and Kangaroo Points as well as 10-inch shell guns at the nearest projecting headlands. He also suggested that furnaces with capacity to heat shot be installed at both batteries on the Western Shore. Furthermore, he wanted to name the installation at Macquarie Point 'Fort Arthur' and arm it with 10 heavy guns on the river front and 16 heavy guns on the harbor front, a keep for 140 men and officers and a 'defensible Bomb-proof Tower Magazine for 1000 barrels of powder'. As Scripps notes, Kelsall did not seem to have considered how many men it would take to man such a massive system of fortifications 'at a time with the entire military presence in the Colony numbered no more than 1000 men, none of whom were artillerymen'.<sup>9</sup> Nevertheless, Kelsall had essentially laid the foundations for a future Derwent Defence Network.

Kelsall's suggestions were not met with any great enthusiasm by Governor Arthur, but they were taken up by his successor, Sir John Franklin. Franklin had made his fame as a polar explorer in the 1820s, but more recently had been cruising the Mediterranean in command of HMS *Rainbow*. In that capacity, as his recent biographer Andrew Lambert has pointed out, Franklin was deeply involved (often unwillingly) in the politics and diplomacy between the British, French, Russian and Ottoman Empires.<sup>10</sup> This background likely lay behind Franklin's enthusiastic support of Kelsall's plans for defence against foreign powers and privateers. In 1838, he wrote to the Secretary of State for the Colonies about the 'extremely unprotected state of this Port and Harbour' and conveyed his professional opinion was that 'a very small armed Vessel could at present molest us here, and in the river Tamar and even levy contributions with great ease and safety if no ships of War happened to be in our vicinity and the supplies so obtained might be of great use in enabling an enemy to keep the Sea'.<sup>11</sup>

Both Franklin and Kelsall were hampered, both by the fraught internal politics of Van Diemen's Land which soured Franklin's reputation in the colony and at home (leading to his early recall in 1843, and departure for his final, fatal Arctic expedition in 1845) and by the economic woes of the colony, which plunged into depression in the 1840s. Nevertheless, under Franklin, the battery on Macquarie

Point was begun (named Queen's Battery, and situated almost immediately underneath the present Cenotaph on the Queen's Domain, begun in 1838) though it was not completed until 1865. Another battery was finished in 1842 – the Prince of Wales Battery, directly above the now-obsolete Mulgrave Battery in Battery Point. The half-moon battery was equipped with ten 8-inch muzzle loading cannons, and a powder magazine followed in 1845. The Prince of Wales battery immediately came under (domestic) fire for poor planning – its line of fire could not even cover adjacent Sandy Bay, and the guns were blocked by the house of the Chief Justice Sir John Pedder. But despite these considerable setbacks (not to say failures) the basic plan for the coastal artillery stations along the Derwent River were now in place.

The pattern of progress and pause, accompanied by anxiety and apathy, continued in the 1850s and 1860s. The Victorian Gold Rush of 1852, the cessation of transportation in 1853, and the establishment of self-government in 1856, all introduced new social and political factors into the question of Hobart's defences as well as the place of the colony (known as Tasmania from 1856) within the British Empire as a whole. The question of how Tasmania was to be defended – by whom, against whom, and whether at all – intertwined with the question of the rights and responsibilities of a self-governing colony. Insofar as the Imperial government was concerned, responsible self-government in the settler colonies went hand-in-hand with the responsibility for self-defence.<sup>12</sup> Insofar as Tasmanians were concerned, if they were to be responsible for their own defence, did that mean that ex-convicts and their children might be fraternizing at the guns with the sons of gentry? These intensely local concerns were joined to the simmering, occasionally boiling, imperial and inter-imperial tensions. The territories and influences of the British, Russians and Americans had been jostling and grinding alongside each other in Europe, Asia, North America and the Pacific for as long as both empires and the fledgling republic had had designs on (variously) Black Sea ports, lucrative fur trades, whaling grounds, Chinese markets, Pacific islands and Central Asian territories – and it was not so very surprising that seemingly out-of-the way places like Tasmania could figure in these larger dramas, particularly as both commercial and scientific vessels continued to use Hobart as an important port in the Southern Ocean.<sup>13</sup>

The outbreak of the Crimean War in 1854 led to a panic that Hobart might be targeted by Russians in the South Pacific, along with other Australian colonies. The *Hobart Town Courier* opined, 'There is nothing to prevent their [the Russians] carrying off seven millions of coined money from the east coast cities of Australia. These are exposed to the certainty of being bombarded and knocked to pieces if they do not yield upon summons to the public and private money which they hold.'<sup>14</sup> The outbreak of the war prompted the construction of the Prince Albert battery, further up the hill

behind the Prince of Wales Battery, but after a few months, Governor Denison decided that the existing British military detachment in the colony, combined with the police who had been trained to operate the existing artillery at Battery Point, was sufficient.



*Figure 3: Southern Tasmanian Volunteer Artillery group at Queen's Battery, the Domain, c. 1878, by Henry Hall Bailly. Courtesy W.L. Crowther Library, State Library of Tasmania*

In 1859, a Joint Committee into colonial defences was established, and recommended three new batteries at Perry's Point, Kangaroo Bluff and Kangaroo Point (the latter two on the eastern side of the river). While these suggestions were largely ignored, what did occur as a result of the Committee's work was the establishment of the volunteer Hobart Town Artillery Company, under Captain A.F. Smith, formerly of the 99<sup>th</sup> (Wiltshire) Rifles. This would eventually evolve into the basis of the Southern Tasmanian Volunteer Artillery, which was established in 1878 (see below). This was vital, as the willingness of the British government to maintain a permanent force in Tasmania was steadily dwindling, and in 1870, all Imperial troops were withdrawn.

The membership of the volunteer artillery expanded and contracted over the next half century until 1903, usually in proportion to war scares and funding crises, but in principle it testified to the

colonists' willingness to take up the mantle of their self-defence. As an 1868 drill book for the volunteers (written by Sergeant P.H. Eccleston, an instructor in gunnery in the Royal Artillery) put it, 'in the eyes of your fellow colonists, it must (or should) be a most meritorious act on your part. It shows that you are willing to sacrifice relatives, friends and self for the public weal'.<sup>15</sup> But there were both practical and social matters that interfered with regular drill and with the size of the volunteer corps. The volunteers comprised a mixture of veterans of other imperial campaigns and local men who joined up for their own reasons. Many, it has to be admitted, likely joined up for the fun of it – being able to wear a striking uniform, blow things up and handle both artillery and rifles. They served an important social function as well as a defence one, putting on parades, concerts, and organized excursions. Moreover, they were important timekeepers. From 1863, at 1 pm daily a large, black wicker ball was dropped from the top of the mast of the old telegraph pole at Mulgrave Battery, and then the battery would fire a massive blank round, and everyone in town would check their watches. It was discontinued in 1918 to public consternation – indeed, a local merchant offered to pay the cost out of pocket and the gun continued to blast away daily until 1927.<sup>16</sup> But the commitment required (including early morning and daytime drills with the guns (even and including the one o'clock gun)) was too much for working men whose employers were reluctant to allow them time off for gun practice. Sgt Eccleston in his handbook for the volunteers stated that if an enemy vessel were doing 10 knots up the river, it would require 226 men to fire 365 rounds from the existing 20 guns over 30 minutes, and this required extensive drilling – for which most of the volunteers simply could not make the time. From 1859 to 1864, the numbers dropped precipitously from 126 members to 53.

Budgets and enthusiasm continued to decline – in part, perhaps, because of the fact that the rolls were open – meaning that the sons of convicts (or ex-convicts themselves) could join up and serve alongside 'respectable' men in their splendid uniforms, so long as they could afford the fee. In 1870, British troops were withdrawn from Australia entirely but bizarrely, no funds were voted for defence in Tasmania, and the volunteer corps lapsed out of existence (though it was not technically disbanded until 1877, after which it was replaced with the Southern Tasmanian Volunteer Artillery), though the volunteers got to keep their personal firearms and their resplendent uniforms.

In the meantime, there had been haphazard attempts to add to the fortifications of the town, but these were hampered by a systemic lack of funds, and by the arrhythmic pulse of the war scares that galvanized the colonists into action. The Queen's Battery was completed in 1865 and equipped with two 70-pounder MLR Armstrong guns and four 8-inch SB guns, together with its unique 'hot shot' furnace. This was thought to be the only oven of its kind in the British Empire outside of

Gibraltar. It could heat shot to white-hot (though this was not recommended as it would melt the guns) and it took careful training for the volunteers not to do so. Nevertheless, the battery only fulfilled the timekeeping function of the 1 o'clock gun. Work commenced on Alexandra Battery in 1871 in response to the war scare sparked by the Russo-Turkish war, but the construction money ran out after a few months and all the activity stopped, and there was virtually no one to fire the guns anyway.

When Russian naval ships visited on scientific missions (like the *Boyarin* in 1870), Hobart welcomed them with fetes, elaborate toasts, and tours of the city. Some of their officers even had photographic *carte de visite* made by Hobart photographers.<sup>17</sup> But when they turned up unannounced (or in the midst of a war scare) things were different. In 1873, three Russian warships – the *Vestnik*, *Afrika* and *Plastun* arrived, unannounced, in the Derwent and set off a brief panic – though a few years later, these same ships of the Russian South Pacific squadron were welcomed with open arms. Rear-Admiral Avramii Bogdanovich Aslanbegov, commander of the Russian South Pacific squadron, called into Hobart in January 1882, and he reported to St Petersburg that the hospitality of the Hobartians was overwhelming – on the day of their arrival. ‘invitations to dinner were sent to us from all sides; nor was there any end to the invitations to picnics and evening parties. One could scarcely imagine a more cordial reception’. He further reported that ‘Colonial ministers arranged boat trips for us, to look over the batteries’.<sup>18</sup> The defences of the colony as a whole languished (despite periodic bursts of activity) until 1877, when new Governors in Tasmania and South Australia, together with Russian war scares, combined to bring the defence network of the Derwent River into a comprehensive unit for the defence of the capital and its harbour.



## The Turning Point and the Conclusion: 1877-1903

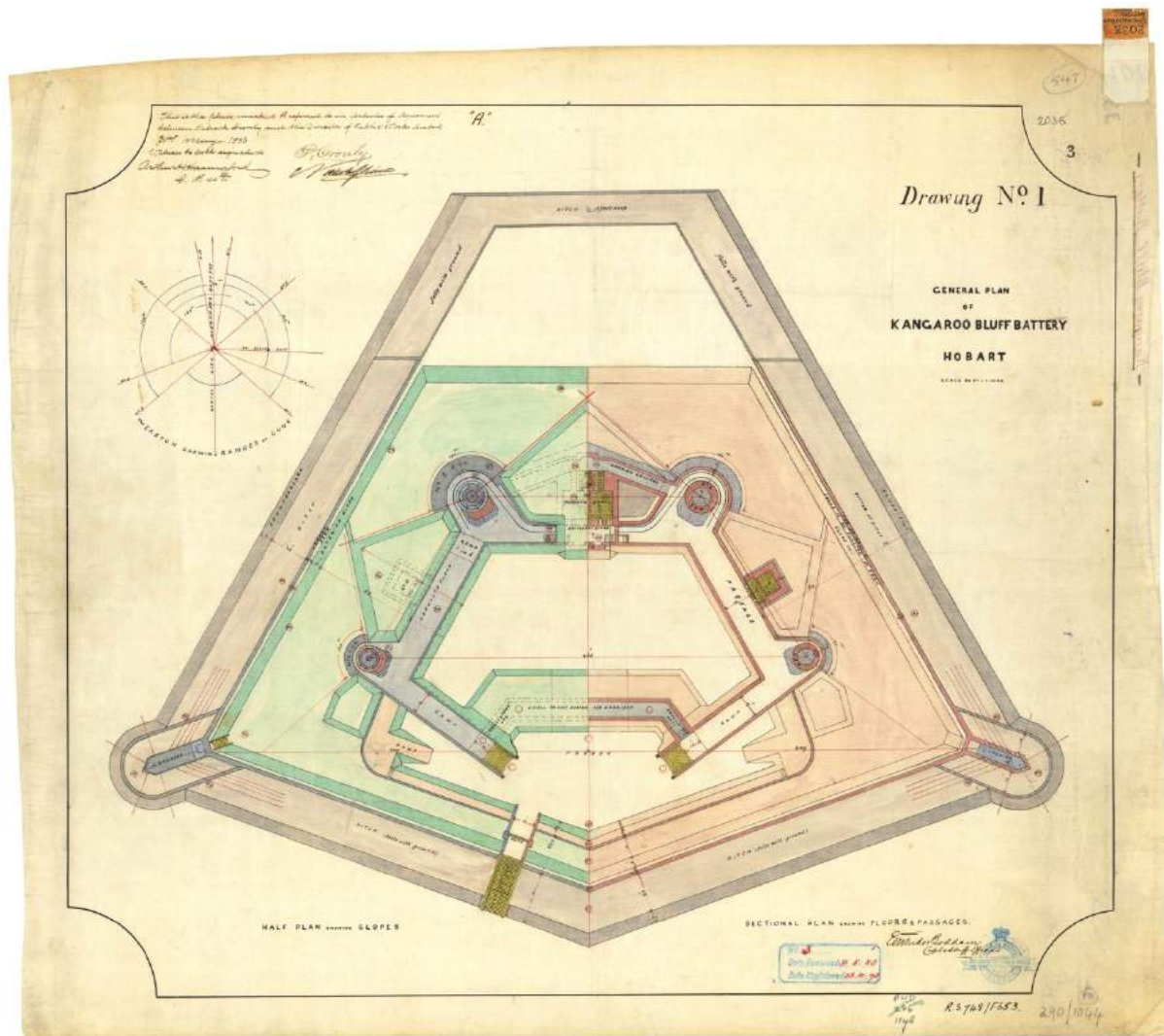


Figure 4: PWD266/1/1148, Plan: Kangaroo Point Battery, Bellerive with details. Arthur Hannaford, May 1883. Courtesy Tasmanian Archives

The year 1877 marked an important turning point in the defences of the colony: the arrival of a new governor of Tasmania, the arrival of a defence expert as the governor of South Australia, and the reorganization of the Volunteer Artillery. In 1877 Governor Frederick Weld arrived in Tasmania and was astonished by the defencelessness of the capital. He recalled the recent spectacle of the Confederate pirate ship, *CSS Shenandoah*, which had wreaked havoc on the American whaling fleet in Bering Strait at the end of the American Civil War (and turned up unannounced in Melbourne in 1865, the source of both consternation and celebration).<sup>19</sup> He pointed out that such a privateer could cause 'general detriment to our commerce as might paralyse our revenue, arrest public works, and throw back the progress of Tasmania for years'. Moreover, advancements in military technology



meant that the range of ships' guns now outstripped those of the existing batteries – meaning that a hostile ship of war could sit comfortably outside the range of the Hobart defences and either bombard the town, or hold it to ransom.

In the same year, a defence expert, Sir William F. D. Jervois (Royal Engineers) arrived in South Australia as both its new governor and as the Defense Advisor to the Australian Colonies. He and his able assistant Lt Col Peter Scratchley reorganized the coastal defences of several colonies, including in Hobart. As Lindy Scripps pointed out, Jervois and Scratchley quickly realized that Hobart's advantageous geographical position on global shipping lanes, combined with her defencelessness, meant that she was a ripe target for enemy forces who could use the island as a convenient spot from which to launch attacks on the Australian mainland. In this sense, they recalled the original fears of French incursions into Van Diemen's Land, and the threat that they posed to the then-nascent Botany Bay colony.

With respect to Hobart's defences, Jervois suggested abandoning the Battery Point batteries (Mulgrave, Prince of Wales, and Albert) as they were largely outdated and would have the effect of drawing enemy fire into the town itself. What he suggested instead was to create a triangular system of defence that would protect the entire harbour, with Queen's Battery at the triangle's apex, supported by a battery at One Tree Point (Alexandra Battery in Sandy Bay, where work had



*Figure 5L Dr Edward Lodewyk Crowther, Major in the Southern Tasmanian Volunteer Artillery, 1878.*

commenced in 1871 but lapsed) and on the other side of the river at Kangaroo Bluff. As he pointed out, a vessel approaching between Kangaroo Bluff and One Tree Point, 'would first be under a cross-fire from the batteries on both these points, and then under a converging fire, at a range of about 2000 yards, from all three batteries'.<sup>20</sup> Lines of electro-contact mines laid between Macquarie Point and Montagu Point would prevent ships sliding in under cover of darkness and mounting an assault from the north.

Jervois's plan was adopted and in 1878 and work began on Alexandra Battery and Kangaroo batteries, initially using prison labour. The initial cost of constructing both batteries was estimated at £21,000, but five years later, the construction cost had more than doubled to £46,000, with the maintenance costs hovering round £12,000. The Hobart Town Volunteer Company was replaced with the Southern Tasmanian Volunteer Corps, with a membership of four companies of

80 men each (two additional companies were established in Launceston) – a total of 853 men across the colony including officers. The Commandant was W.H. St. Hill, while the officers were voted in by the men, including Dr. Edward Lodewyk Crowther, who was elected a Major in the force.

At this time, Queen's Battery was the most up-to-date and functional of the existing batteries. In 1883, it was modified to incorporate a searchlight engine, designed to operate in tandem with searchlights at Alexandra Battery to light up the river in the case of a nighttime attack. In 1884, the ordnance was updated, with five of the smooth-bore guns shipped to Britain to have their barrels rifled. Three were mounted in 1887, on wooden sliding carriages. The platforms at Queens were wooden 'dwarf traversing' structures which moved on iron racers, tracing either a large arc or a circle.<sup>21</sup>

The war scare of 1885 (prompted by Anglo-Russian tensions around the second Anglo-Afghan War, together with the increasing belligerence of Tsar Alexander III) had a dramatic impact on Hobartians. Notwithstanding the whaler in 1818 who set up his own private battery on the roof of his house to guard against the French, the war scare prompted some of the most remarkable Hobartian reactions to external threats. James Backhouse Walker recorded in his journal that one man was preparing to take his family into the foothills of Mount Wellington at the first whiff of danger and that:

The panic for a few weeks was very severe, owing largely to the most exaggerated notions of what the Russians would do. Many people had seriously made up their minds to fly the country in the event of war being declared, as they were convinced the Russians would bombard and burn the town, land large bodies of men, and murder, ravish and plunder without restraint.<sup>22</sup>

The war scare prompted the completion of Alexandra and Kangaroo Batteries. The works at the Kangaroo Bluff Battery were completed in 1885. The fort was pentagon-shaped, tucked into Kangaroo Bluff. It was designed to both bombard enemy ships with artillery and rifle fire, and to withstand an infantry attack by virtue of the *caponiers* on the land sides of the fort, which were accessed through iron hatchways. As the *Tasmanian Mail* reported during the fort's construction in 1884, 'An assaulting party attempting the fort would be enfiladed crossing the ditch or planting ladders to scale from these caponiers, which will be covered... and entered by passages from within'.<sup>23</sup> These protected passages led onto a warren of three-meter deep passages and tunnels that accessed the underground magazine, stores, a lamp room, well and the loading galleries. In 1885, a dry mound and a moat were added to the structure, and a fence around the moat was added in November when a child fell into the water and drowned.

The armaments at Kangaroo Bluff were, together with those at Alexandra Battery, by far the most modern of the Derwent defences by the time they were completed. In 1882, two muzzle-loading,

rifled 8-inch Armstrong guns (weighing 14 tons each) arrived for the Kangaroo Bluff Battery from Britain on board the barque *Lufra*.<sup>24</sup> They were dragged up the bluff by twelve draught horses. Local resident Harry O'May, who (together with hundreds of other Bellerive residents) witnessed the guns being dragged into place, later recalled, 'It was a sight to see those magnificent beasts dig in their toes and haul that dead weight of 14 tons up that steep pitch and across the bluff to the Battery'.<sup>25</sup> In 1885, rifled muzzle-loading 80-pounder cannons were installed on each flank of the fort – known as the 'flank guns'. These guns had originally been smooth-bore 64-pound cannons which had been converted to rifled barrels, and were mounted on sliding wooden carriages. These were in 1890 with a Nordenfelt machine gun at the entrance of the fort.

In 1885, the batteries at Battery Point were dismantled and the stones relocated, mainly to Alexandra Battery. Blasted out of the living rock, the Alexandra Battery consisted of a parapet of 8 feet of concrete and 22 feet of earth, central and flank magazines, ammunition, small stores, and a ditch enclosing it. A redoubt (or outwork) at the rear of the structure was begun in 1878 but not completed until 1885 on account of budget constraints. It was equipped with a 70-pounder RML on a wooden sliding carriage and two 7-inch RML guns on iron carriages. This was augmented in 1885 by a unique type of ordnance - special hydro-pneumatic disappearing guns. These 6" breech-loading guns were manufactured by the Elswick Ordnance Company, and one of them remains at the site today. According to Scripps, 'The mountings converted the energy of the recoil into lowering the guns into the pit on large hinges. The guns could then be reloaded in comparative safety until it was again raised to the firing position by a hydraulic ram'. In addition, the Alexandra Battery was also home to rare equipment in the form of two depression range finders, mounted behind the gunpits on the traverse, which enabled the accurate calculation of range.<sup>26</sup>

Ironically enough, almost as soon as the defence network around the Derwent was nearly completed, it began to be abandoned. In 1890, the Colonial Defence Committee in London stated:

The distance of the Tasmanian ports from any practicable hostile base is so great that moderate measures of defence, combined with a high standard of organisation for war, are alone required.<sup>27</sup>

This stance combined with the depression of the 1890s, served to effectively throttle funding for the batteries, and the fear of attack became so remote that in 1893, a local resident built a new house in Sandy Bay immediately in the line of fire of Alexandra Battery. The rolls of the Volunteer Corps dropped precipitously to less than 1/3 of the force required to operate the guns, and even measures to pay the volunteers to train made a difference, as men left the corps to seek work and, in 1899, to join up to serve in the Boer War.<sup>28</sup>

In 1903, the Commonwealth took over the defence of Tasmania together with the other states and territories. The decision was made at this point to abolish the nineteenth-century batteries that had been built spasmodically the course of the previous century. By 1909, a new fort, Fort Nelson, had been established high above Hobart on the slopes of Mount Nelson, leaving Alexandra, Kangaroo, and Queen's Batteries obsolete.<sup>29</sup> The batteries, which had been constructed in fits and starts that mirrored the episodic panics of war threats, were later turned into city parks. Queen's Battery was filled in by 1922, and in 1926, the Cenotaph was erected on top of it. While Alexandra Battery was replaced as a functional defence site by Fort Nelson in 1909, nevertheless it continued to be used as an observation post and a training site until World War II. It, too, was eventually turned into a public park, though considerably changed from its original format. The gun emplacements have been retained, though the site itself has been levelled and a car park sits on top of the redoubt. At Kangaroo Bluff, the guns were buried and in 1930, the Clarence City Council took the site over as a public park. It was declared as an historic site in 1970 and is currently managed by the Parks and Wildlife Service.

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## Notes

- <sup>1</sup> Lindy Scripps, *Queen's Battery & Alexandra Battery : Historical Study*. (Hobart : Parks and Recreation Dept, 1989), 3.
- <sup>2</sup> Quoted in Scripps, 4.
- <sup>3</sup> Dmitrii Ivanovich Zavalishin, "The Round-the-World Voyage of the Frigate 'Kreiser' in 1822-1825, Under the Command of Mikhail Petrovich Lazarev," Text no 8 in Barratt, Glynn, translator, "Russian materials relating to Van Diemen's Land and Russian activities there, 1806-1995." Typescript, State Library of Tasmania.
- <sup>4</sup> P.H. McFie, "The Signal House, Mulgrave Battery, Battery Point." [Hobart, TAS, 1985]. State Library of Tasmania.
- <sup>5</sup> The literature here is considerable and growing, but see particularly Henry Reynolds, *The Other Side of the Frontier: Aboriginal resistance to the European invasion of Australia*. (Sydney: University of New South Wales Press, 2006) and *Forgotten War*. (Sydney: NewSouth Publishing, 2013). See also James Boyce, *Van Diemen's Land*, (Melbourne :

Schwartz Publishing Pty. Ltd, 2010) especially chapters 6 and 12 and Nicholas Clements, *The Black War : Fear, Sex and Resistance in Tasmania*. St Lucia, Queensland : University of Queensland Press, 2014.

<sup>6</sup> Quoted in Eleanor Robin, *Swanston: Merchant Statesman*. (North Melbourne, Vic: Australian Scholarly Publishing Pty Ltd, 2018), 22.

<sup>7</sup> "Gleanings" *Bent's News and Tasmanian Register*, 23 December 1837: 4

<sup>8</sup> Quoted in Scripps, p 8.

<sup>9</sup> Scripps, 11.

<sup>10</sup> Andrew Lambert, *Franklin: Tragic Hero of Polar Navigation*. (London: Faber and Faber, 2009), pp 44-60.

<sup>11</sup> Tasmanian Archives, GO33/1/19, no 57, 15 June 1838, p 113-115

<sup>12</sup> Peter Burroughs, "Defence and Imperial Disunity" in Andrew Porter (ed) *The Oxford History of the British Empire: The Nineteenth Century* (Oxford and New York: Oxford University Press, 2001), 320-345

<sup>13</sup> For these larger geopolitical concerns of British, Russian and American relations around the Pacific, see James R Gibson, *Otter Skins, Boston Ships and China Goods: The Maritime Fur Trade of the Northwest Coast, 1785-1841*. (Montreal and London: McGill-Queen's University Press, 1992) and Ilya Vinkovetsky, *Russian America: An Overseas Colony of a Continental Empire, 1804-1867*. (Oxford and New York: Oxford University Press, 2011).

<sup>14</sup> *Hobart Town Courier*, 22 April 1854.

<sup>15</sup> R. H. Eccleston, *Handbook for the Tasmanian Artillery Volunteers*. [Hobart] : James Barnard, Govt. Printer, 1868, 2.

<sup>16</sup> Dollery, E. M, "The Military History of Tasmania : An Outline of the Period 1803-1903." [Launceston, Tas. : Royal Society of Tasmania], 1960, 157.

<sup>17</sup> Tasmanian Archives, PH31/1/434, Carte de visite - Balik, A. - Russian Naval Officer - 1870 - (photo taken by S. Spurling, Hobart).

<sup>18</sup> Rear-Admiral Avramii Bogdanovich Aslanbegov, Report dated 'At Sea, 11 June 1882'. Text 11 in Barratt, "Russian Materials."

<sup>19</sup> Tom Chaffin, *Sea of Gray: The Around the World Odyssey of the Confederate Raider Shenandoah*. (New York: Hill and Wang, 2006

<sup>20</sup> Scripps, 29.

<sup>21</sup> Scripps, 75

<sup>22</sup> James Backhouse Walker, *Prelude to Federation (1884-1898): Extracts from the journal of James Backhouse Walker*. Peter Benson Walker, ed. (Hobart: O.B.M. Publishing, 1976), p 19.

<sup>23</sup> Quoted in John Sargent, *Kangaroo Bluff Battery: Looking Forward, Looking Back*. (Bellerive, Tas: Bellerive Historical Society, 2012), p21.

<sup>24</sup> Kangaroo Bluff Battery, History, Parks and Wildlife Service Tasmania, <https://www.parks.tas.gov.au/index.aspx?base=2673>, accessed 14 February, 2019.

<sup>25</sup> Quoted in Sargent, p17.

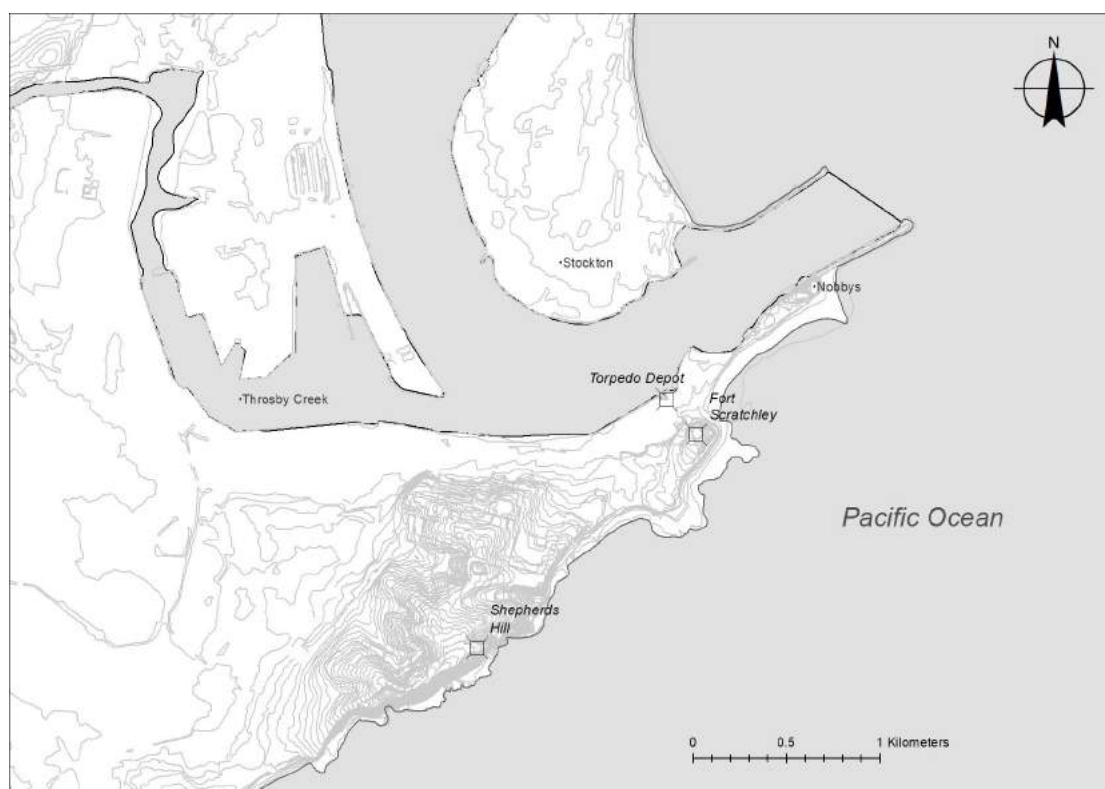
<sup>26</sup> Scripps, 77

<sup>27</sup> Quoted in Scripps, 42.

<sup>28</sup> Scripps, 42.

<sup>29</sup> Wyatt, Douglas Morris. *Tasmanian Colonial Artillery, 1803-1903 : A Chronological Diary of the Formation and Development of the Tasmanian Volunteer and Permanent Artillery from 1803 to 1903.* ( [Taroona, Tas.] : D.M. Wyatt, 2004), 100.

# FORT SCRATCHLEY AND SHEPHERDS HILL NEWCASTLE





## EXISTING STATEMENTS OF SIGNIFICANCE

Fort Scratchley does not have separate heritage listing on the **NSW State Heritage Register**, but is included in the broader Coal River Precinct listing, although it is little recognised in this registration and there is little detail.

However, it was listed in the now-defunct **Register of the National Estate** as follows:

The Fort Scratchley building group, dating mainly from the 1880s and consisting chiefly of the barracks precinct, is historically highly significant. The area is associated with the early phase of Australian coal-mining and coastal navigational aids. More importantly, the precinct is directly associated with the development of coastal defences at one of Australia's major industrial cities. Built due to concerns to protect Newcastle from seaborne attack, at a time when fears of Russian aggression were high in the colony, and later extended and seeing action during the Second World War, the site reflects defence needs and strategic concerns over a very lengthy period. (Criterion A.4)

Fort Scratchley is of particular interest as one of very few 'closed' fortresses in NSW, for the way it illustrates the stratified nature of military forces, and for its reflection of military planning of the period. (Criterion B.2)

The buildings generally reflect Victorian Regency style and individually are important as rare examples of late nineteenth century fortress structures. (Criterion D.2)

Fort Scratchley's buildings are associated with prominent nineteenth century military planners Major General Sir William Jervois and Lieutenant Colonel Peter Scratchley, and with NSW Colonial Architect James Barnet. (Criterion H.1)

The buildings have strong social significance for the Newcastle community, and for the wider community as a major tourist attraction. (Criterion G.1)

Further, the buildings have aesthetic significance on account of their low scale, similarity of materials and interesting roofscapes, and their dramatic location on a prominent hilltop which makes them a major visual element of the shoreline. The regular planning of the buildings, the vistas between buildings and views to surrounding town and country landscapes contribute to the aesthetic value of the group. (Criterion E.1)

The **NSW State Heritage Register** lists the Shepherds Hill Defence Group Military Installations as follows:

The Shepherds Hill Group is historically significant at a State and possibly a national level, because its history forms an important part of the story of Australian coastal defences, spanning a six-decade period from the late 19th, to the mid 20th century. During this time, the site was a key defence post. Its history provides an insight into the way that NSW defence policy reacted to

changing technologies, threats and types of warfare. During WWII, the fortifications at Shepherds Hill played a co-ordinating role in the defence of Newcastle. Defence of Newcastle during this time was of high significance to the state, because Newcastle had become an area of great strategic and industrial importance in NSW, with its steelworks and operational port. The majority of the state's shells were produced in Newcastle and it was also the site of the NSW Dockyards. In order to protect these productions, a new system of defence was undertaken, which included the strengthening of Fort Wallis and the construction of two new close defence batteries - Shepherd's Hill and Fort Scratchley. The defence system proved its worth when in June 1942, Newcastle was fired on by cruising Japanese submarines, and Newcastle gained the distinction of being the only place in Australia that returned enemy fire with the launching of guns from Fort Scratchley. The fact that the Shepherds Hill fortification was simultaneously manned by members of the Navy, Army and the Airforce for a variety of functions is rare, and possibly unique in Australia.

# **FORT SCRATCHLEY AND SHEPHERDS HILL DEFENDING NEWCASTLE**

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Newcastle is located where the Hunter River enters the Pacific. Over time the river has formed a barrier estuary consisting of barrier dunes along the coast to the north at Stockton and behind these are alluvial and estuarine deposits carried down by the Hunter River. The elevation of the Stockton area ranges from 6m to 18m in the north. On the southern side of the river there are a series of rolling hill, steep coastal cliffs and outlying islands formed on the late Permian Newcastle Coal Measures. The elevations in this area range from 28m at Nobbys, 32m at Fort Scratchley, 70m at the Obelisk and 78m at Shepherds Hill.

From a navigational point of view, the entrance to the Hunter River was quite tricky to navigate with shallow water to the north off Stockton (the Oyster Beds) and to the south Nobbys, then an island, and a series of semi-tidal rock outcrops between Nobbys and the mainland. Tides and winds would add to the danger particularly for sailing ships which had limited ability to manoeuvre adverse winds and tides, consequently there were many wrecks and strandings at the entrance to the Hunter.<sup>1</sup> Thus, the initial defence of Newcastle was its topography with its dangerous entrance to the harbour.

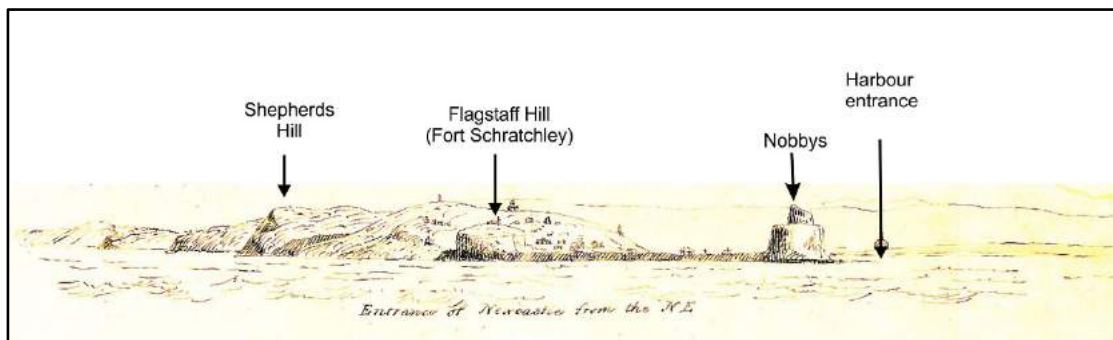


Figure 1 Newcastle from the sea looking North East, from 1851 Newcastle Harbour, Hunter River from HMS *Acheron* 1-676 Lands and Property Information, annotated.

The entrance to the Hunter was first surveyed in September 1797 by Lieutenant John Shortland of the H.M.S. *Reliance* and the coal seams in the Newcastle Coal measures were quickly identified and trial samples of coal were exported to the United Kingdom to ascertain their commercial value. Private traders such as Simeon Lord and James Underwood and Hugh Meehan were granted licence to procure coal and cedar.

Governor King in 1801 ordered a survey party led by Lieutenant-Colonel William Paterson to go to the Hunter River to explore the feasibility of setting up a penal settlement there. Paterson explored

the land upstream and discovered open grasslands in the middle areas of the Hunter Valley. John Platt, one of the very few experienced miners in the Colony was sent with Paterson and he established small workings at the exposed coal seams at Colliers Point. In mid-1801 a small convict settlement was established to work the coal seams but withdrawn after a few months. Coal mining continued in 1802 and 1803.

### **Convict Era Defences**

On 14 March 1804 Governor King reopened the settlement as a place of secondary punishment following the Vinegar Hill rebellion. Thirty-four of rebel convicts along with a military garrison of a sergeant and nine soldiers were sent to Newcastle and the area was closed to private traders. The first Commander of the settlement, Lieutenant Menzies, was a Royal Marine, and this caused difficulties with the NSW Corps who were of course an Army regiment and refused to take his orders.

In his initial report on the settlement, Menzies wrote to Governor King suggesting 'A few Guns could be placed to great advantage on a commanding height above the Town so as to prevent any vessel in case of being seized by Convicts while up Patersons River from getting out of the Harbour'<sup>2</sup> King replied, 'A four Pounder will be sent by the *Resource*, with its materials and Ammunition, as well as six Stand of Black Arms'. In a later letter King advised that 'I have also directed another Six Pounder to be sent and some Shot but must recommend your placing it in as secure situation as possible, to prevent its being made an improper use of'.<sup>3</sup>

Unfortunately, no further information has been found regarding these guns.<sup>4</sup> Later reports of construction work at Newcastle fail to mention any fortifications and accounts of ordnance in NSW also fail to mention guns at Newcastle. As these are quite small artillery pieces with limited range, it is likely that they were on field carriages and mounted on or near the Wharf in order to make maximum use of their limited range to stop vessels escaping down the Hunter. As Governor King was continually pressing the need for skilled artillerymen to be sent to NSW it seems unlikely that the guns if used would be manned by a skilled crew.

It is worth observing that these defences were primarily for internal security against convict rebellion or escape rather than external threats.

There is a report of a fort being erected on Flagstaff Hill. Writing in 1873 John Bingle who claimed personal experience with Newcastle from 1821 wrote:

Lieutenant Close, of the 48th Regiment who was acting Engineer to the convict gangs employed in constructing the breakwater. There were also seven (7) guns placed on the point of the hill, in the shape of an earthen battery. They were used for salutes on high days and holidays, King's birthdays, and other rejoicings and on more than one of those occasions the gunners suffered mutilation in body or limb, and it affords them no doubt a lively recollection of the memorable Fort Fiddlestick for the remainder of their days. However, these formidable weapons will neither frighten our foes, nor prostrate their gunners for the future.<sup>5</sup>

The author is curious about this battery as following a search through the *Historical Records of Australia* and the *Historical Records of NSW*, in the accounts of the achievements of the Commandants at Newcastle and of the Governors and in the Bigge report, the construction of fortifications at Newcastle was not mentioned. As these were apparently commanded by E.C. Close, who was also a notable artist, it seems curious that his sketches and watercolours of Newcastle from the early 1820s fail to show these guns, although they show other features such as the military barracks.<sup>6</sup>

The convict settlement was relocated to Port Macquarie in 1822 and the Newcastle area was opened to free settlement and trade. The intention was to make Newcastle a port for the settlement in the Hunter Valley as well as to continue coal mining. The town of Newcastle was set out by Surveyor Danger c1823<sup>7</sup> whose map<sup>8</sup> included a very substantial fort on Flagstaff Hill that does not appear in other contemporary maps or illustrations of Newcastle and therefore must be aspirational rather than real.

The town of Newcastle gradually developed with coal mining continuing in the vicinity of the town, notably around and under Flagstaff Hill and later in the vicinity of Shepherds Hill. Flagstaff Hill was also quarried to provide stone for a breakwater to connect Nobby's with the mainland, a project commenced by Governor Macquarie.

## **Reporting on Defences (1850's -1880's)**

Passing over the detailed history of the coal industry, it is important to note that Newcastle coal was recognised as a quality product and port facilities were developed to facilitate coal transport and loading. These included Australia's first railway and later, from 1855, the development of a rail network into the Hunter Valley. Cheap coal and proximity to a port also encouraged the construction of process engineering facilities such as smelters. The port was improved to facilitate access and to facilitate coal loading.<sup>9</sup> Despite the fluctuations in the economy over 50 years Newcastle developed as major coastal city.

With the development of the town and its prosperity thoughts of its citizens turned to its defence. Technological change since the 1820s had resulted in the development of steam-powered ships and from the 1850s the major navies began to adopt steam power for their warships (thus also providing a market for Newcastle coal). A steam warship was much more manoeuvrable and therefore much of the natural defence of Newcastle was negated.

In the Napoleonic wars the Royal Navy blockaded the French ports and the main limitation was food and water. However, a steam warship would require regular coaling to refresh its bunkers which acted as a constraint on a navy's ability to project power.<sup>10</sup> Coaling took time and required a sheltered location and there was no sense of a 'fleet train' such as the USN developed for Pacific operations in the 20<sup>th</sup> century. Given long distances from possible enemies for a fleet to be effective against Australian defences some form of coal supply was needed. In the somewhat speculative scenarios of an attack on Sydney it was suggested that the first action of an enemy would be to seize a coal supply for their fleet and the two options were seizing Newcastle or a coal jetty on the Illawarra coast.<sup>11</sup>

As for the foe, in 1853 the *People's Advocate and New South Wales Vindicator* was in no doubt it was Louis Napoleon (presumably with the French nation) who would occupy Botany Bay and advance along the Newtown Road towards Sydney, if not stopped by Café Lattes and a volunteer militia armed with Minié rifled muskets.<sup>12</sup> Five months later the French and British were allied with the Turks in the Crimean War and the Russians became the customary enemy, a position they hold even to this day.

The onset of the Crimean War was officially notified to the Legislative Council by the Governor on the 27<sup>th</sup> June 1854 (although war was officially declared on the 29<sup>th</sup> March 1845). War prompted the NSW Government into action to construct and repair the defence of Port Jackson but in

Newcastle the main effect was the formation volunteer units which were allowed for under Volunteers Act of August 1854.<sup>13</sup> Throughout 1855 to 1860, meetings were held in Newcastle with the purpose of creating a Volunteer Artillery and Rifle Corps to defend the town.<sup>14</sup> From the meetings came the formation of the Third Battery of Volunteer Artillery. Captain Ewan McPherson commanded the battery.<sup>15</sup> With the ending of the Crimean War patriotism waned and the unit never seems to have been maintained, although it fired a 21 gun salute when the Governor opened the Great Northern Railway in April 1857<sup>16</sup> and on the King's Birthday in May.<sup>17</sup>

In the early 1860s a new enemy emerged - the United States of America (then engaged in the Civil War). The Secretary of State for the Colonies wrote to the NSW Governor in December 1861, 'The intelligence conveyed to Australia by this mail, will inform you of the grave reasons for apprehending that this country may shortly be involved in a war with the United States.'<sup>18</sup> Although the immediate threat was averted, there was on-going tension during the U.S. Civil War over the British support for the Confederacy and later over Canada.

This tension lead to the renaissance of volunteers with artillery, mounted rifles and new rifle companies being raised in Newcastle and the Hunter Valley. The Volunteer Artillery manned No.3 Battery which was stationed in Newcastle. By 1863 No.3 Battery consisted of 48 all ranks (one captain, one lieutenant, one medical officer, six NCOs and 39 members). In Newcastle there was also a company of the New South Wales Rifles Volunteer Infantry which would have supported the Artillery.<sup>19</sup>

In 1863, the NSW Legislative Assembly set up a Select Committee to enquire into Harbour Defences and took evidence from a Lieut. Tomkins, a former RN officer, and D.T. Allan, the Newcastle Harbourmaster. The evidence from both individuals was that Newcastle was worth defending and they favoured water level batteries at Stony Point, an outcrop at the base of Nobbys,<sup>20</sup> where ships would be close to the shore and easily raked by artillery. Allan also noted the presence of obsolete guns buried in the sand where he resided and mentioned that that the Volunteer Artillery had two 6-pounder guns (presumably on field carriages).

The Committee recommended that 'a battery of six 32-pounders be erected on or near Stony Point, and that, in addition, four field guns be handed over to the charge of the Newcastle Volunteer Artillery'.<sup>21</sup> A similar Select Committee in 1865 endorsed the recommendation.<sup>22</sup>



The *Maitland Mercury* reported in August 1866, 'The two new 32-pounder guns for the use of the volunteer artillery were on Monday week convoyed to the station appointed for them, on Flagstaff Hill, under the superintendence of Mr. James Russell. They will be at once mounted on their carriages and placed in position'.<sup>23</sup> The guns were in position by the 4<sup>th</sup> September when a 19 gun salute was fired as the Governor passed through Newcastle.<sup>24</sup> When the Duke of Edinburgh visited Newcastle in March 1868 both the Volunteer Artillery and the Naval Brigade fired 21 salutes, one from the Wharf and one from Flagstaff Hill!<sup>25</sup> However, a third of the guns were not mounted.

This inaction was in many ways fortunate; the 32-pounder gun, for example, was an obsolete weapon in the face of the development of rifled guns (either breech loaders or muzzle loaders), and increased calibres and weight of shells. On top of this, the results of the bombardments of coastal fortifications during the American Civil War had demonstrated weaknesses in standard fortification design.<sup>26</sup> The changes to artillery technology were reflected in changes to the defence schemes for Sydney<sup>27</sup> (but not for Newcastle) and an order for the fifteen 68-pounder guns, with their carriages, platforms, ammunition, and stores was placed through the British government to the Royal ordnance factory at Woolwich.<sup>28</sup>

The 1870s dawned with the withdrawal of the British garrison troops from NSW and the other colonies, with the last troops embarking on the 23 August 1870. This prompted a flurry of enquiries into the defences of Sydney, but little consideration was given to defending Newcastle. The *Newcastle Chronicle* reported that members of a commission had visited Newcastle in late 1870 but that no money for fortifications was allocated. Newcastle was defenceless but the Government withheld 'the means of protection from us, and why it does so is a mystery which it ought to be called upon to explain' the paper complained.<sup>29</sup>

In fact, a Commission report was submitted to the Government in February 1871<sup>30</sup> which, after discussing the strategic nature of Newcastle's coal trade, reported as follows:

With this view, your Commission recommend that a boom of similar construction to that described in their former Report should be laid obliquely across the narrow part of the channel, at the entrance to the port; that is to say, from Stony Point to the Oyster Bank. The oblique direction would prevent the boom being run under by the tide, which at this point has considerable velocity, would further tend to turn a vessel coming in contact with it into the shoal water at the shore, and would, moreover, prevent it being struck at right angles.

The boom should be defended by a system of torpedoes<sup>31</sup> both on the outside and inside, and be further supported by batteries at the following positions-

	8-in	32
Signal Hill	2	2
Cathedral (north side)	---	2

Your Commission would also recommend a battery of two 32-pounders on the high cliffs opposite the Barracks, to command the immediate seaboard, from which an enemy might bombard the city.<sup>32</sup>

Again, nothing much was done to implement these works.

The volunteer movement was still strong in the Hunter region, the *Newcastle Chronicle* recording manoeuvres and mock engagements with blank ammunition of almost 400 hundred troops. The Governor and the overall commander of the volunteers Colonel Richardson attended. It was reported that ‘a salute of seventeen guns, being fired by the Volunteer Artillery, from the battery, on the Old Flagstaff Hill’ was fired for the Governor.<sup>33</sup>

In January 1871, it was reported that two new guns were exchanged for the old ones mounted at Flagstaff Hill, but these seem to be of the same 32 pounder type.<sup>34</sup> In late 1873 however, it was announced that ‘two 68-pound guns will shortly arrive from Sydney to be placed on the new platforms on Flagstaff Hill, for the use of the Battery, and will be of a character to protect the entrance of the port’.<sup>35</sup> The guns were reportedly at Newcastle in late January 1874 and new traversing platforms were in the course of construction.<sup>36</sup>

A well-known photo shows the Volunteers and their 68 pounder smooth bore muzzle loading gun on what seems to be a very exposed position with minimal protection for the crew (presumably there was some form of storage for the ammunition). The gun points to the entrance of the Harbour north-east of Nobbys which demonstrated the change from shorter range batteries located at water level inside the harbour entrance.

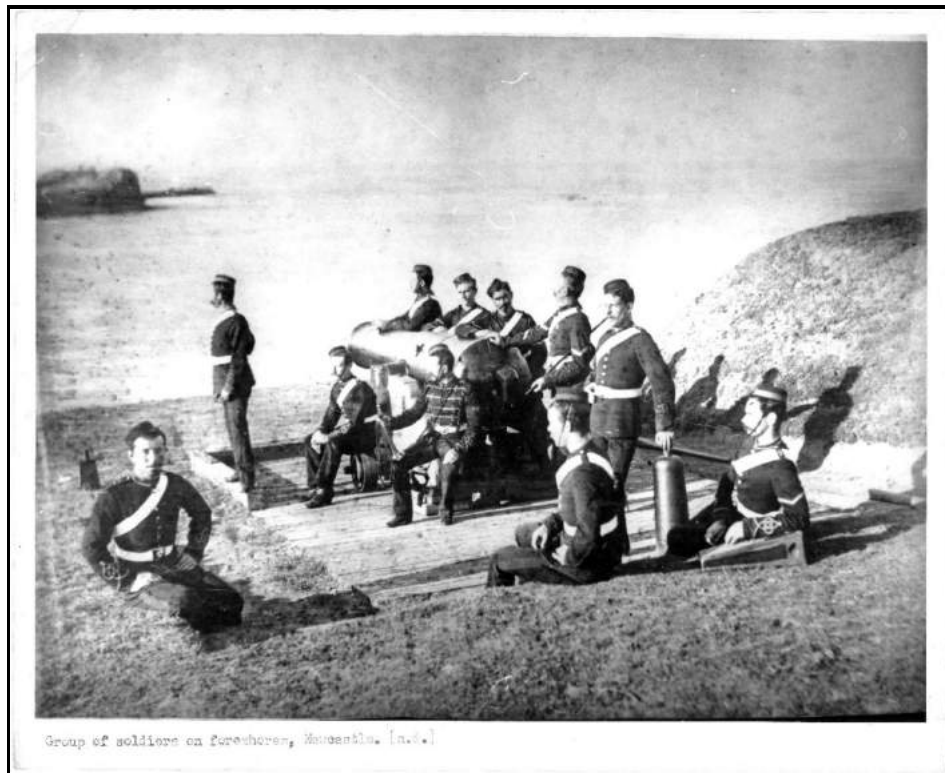


Figure 2. The Newcastle Volunteer Rifles and their 68 pounder (SBML) emplaced c1874-1878, source is unclear but reproduced in Carey, Lewis, and R. S Mort. *Fort Scratchley, Newcastle, New South Wales*. 2nd Edition ed. Newcastle Council of the City of Newcastle, 1886.

### **Fort Scratchley and torpedo defence**

In 1876 the threat of war with Russia prompted several of the Australian Colonies, including New South Wales, to request that services of an experienced be made available from the United Kingdom officer to advise on fortifications. The colonies requested that Sir William Francis Drummond Jervois RE, an expert on coastal defences and the possessor of an extensive set of whiskers, be dispatched and this was arranged as he was Governor of the Malay Straits at the time.<sup>37</sup> Joining Jervois were Colonels Laffan and Scratchley, both RE. Scratchley had previously reported on the defences of Victoria.<sup>38</sup> Both Jervois and Scratchley were to have an important influence on the design of fortifications in Australia and New Zealand.

Sir William Jervois, Colonel Scratchley, Mr. E. O. Moriarty (Public Works harbour engineer), and Colonel Richardson (commander of the NSW forces) visited Newcastle on the 14 and 15 May 1877 to inspect the defences. Captain Allan's Hill (aka Flagstaff or Signal Hill) in particular was inspected.<sup>39</sup>

Regarding the defence of Newcastle, the Jervois report acknowledged that the best protection was the British Empire and the Royal Navy but in the event of war a raid might be launched to loot the

wealth of the Australian colonies. In that case the report identified Newcastle's importance as a source of coal.

'An enemy would probably first endeavour to obtain possession of Newcastle where the harbour and large supplies of coal would afford him a good coaling station.'<sup>40</sup>

To prevent this the report recommended

As however I have previously stated, special local protection must be provided for Newcastle. Here a fort should be constructed on Signal Hill at a height of about 105 feet above the sea-level, for three 9-inch and four 80-prs. M.L.R. guns. The 9-inch guns will bear to seaward and on the approach to the port, whilst the two on the left will also command the entrance to the harbour. These guns should be placed en barbette with large traverses between them. The four 80-prs. will command the harbor throughout from its entrance; and in order that they may be secure both against direct and high angle fire, they should be placed in casemates cut out of the hill. These casemates should be planned with two faces, arranged so that all the guns will fire across the harbor, whilst the two on the right will, at their extreme lateral range, bear on the entrance, and the two on the left will similarly bear up the harbor.

The site of Signal Hill, besides being exceedingly well placed for the defence of Newcastle Harbor, has a steep cliff on all sides but one, and can easily be made inaccessible by a little scarping, and by cutting a ditch on its land-side. On this side should be place a small casemated barrack; and the whole will be formed into a secure against assault, with the necessary accessorises of a magazine shell-rooms, and other accommodation. Bomb proofs will be provided in the work, capable, in conjunction with the barracks, of accommodating the whole garrison, which, in time of war should consist of 80- men, 30 of whom should be regular artillerymen and 50 from the Naval Brigade. The conditions of the case render it unnecessary that a field force should be provided for the defence of Newcastle.

It is proposed to place electro-contact torpedoes across the entrance to the harbor, under the fire of the guns of the fort.<sup>41</sup>

The fort proposed by Jervois became what is now known as Fort Scratchley. Scratchley became responsible for the detailed plans which were drawn up by Mr G.A. Morell of the Colonial Architect's Department. For once matters moved swiftly, the *Newcastle Morning Herald* reported in April 1878 that a temporary platform for four 80-pdr guns sent from Sydney was being constructed with a temporary breastwork and magazines. 'On the temporary platforms there will be two 68 pounders and four 80 pounder guns, to defend the place.' Senior officers had arrived to supervise the work and a detachment of permanent artillerymen was *en-route*. The plans for the permanent fort were reported as being completed, and construction was estimated to take 8 months.<sup>42</sup>

Tenders for the construction work were called for in June 1880 <sup>43</sup> and several times subsequently indicating that the Government had trouble getting a successful tender. The contract documents

were signed on 7 December 1880, with Messrs James Russell, J. Fletcher and Kenrick the successful contractors.<sup>44</sup>

In addition to works on the fort, the *Evening News* reported that work on the torpedoes' defence (aka mines) was underway in Sydney and Newcastle.<sup>45</sup> The contract for the works was given to Brooks and Goodsir and work was underway in March 1878.<sup>46</sup> It is not clear from the articles what was being constructed and where, but from later reports it would be a firing station and observing station. There is a report of an artillery practice shoot in which a premature exploding shell, 'the fragments narrowly missing the men employed at the Torpedo Observatory on the Breakwater'.<sup>47</sup> It is assumed therefore this was the approximate location of the torpedo facilities, with the nearby small boat harbour being suitable for boats which would lay the torpedoes.

In mid-May 1878 the torpedo works were reported as being nearly complete while the main works for the fort had been set out by Morell.<sup>48</sup> But clearly the construction of the fort did not proceed at that time for in October 1880 the *Newcastle Morning Herald* reported that the site had been set out and works were about to begin.<sup>49</sup> It seems that construction began in early 1881 but later in May the works began to encounter the remains of the earlier convict coal mines in the form of tunnels which threatened to undermine the fortifications. As can be imagined, this caused a great deal of alarm and a preliminary inspection of the workings was made by Mr. Mackenzie, Examiner of Coal Fields, accompanied by Mr. Thomas Mills who had worked the seam at Flagstaff Hill in c1840.<sup>50</sup> Thereafter Scratchley and others made visits to inspect the workings and it was concluded that they required thorough backfilling<sup>51</sup> and subsequently Thomas Croudace an experienced mine manager from the Lampton Mine was employed by the Government to supervise the works.<sup>52</sup>

The main fortifications were largely complete by February 1882<sup>53</sup> and the guns were emplaced in April 1882.<sup>54</sup> Contractor Russell was paid around £22,000 which included allowances for filling in the coal workings and a 12 month delay due to the length of time it took to demolish the harbourmaster's house and associated buildings.<sup>55</sup>



Figure 3. Artillerymen loading a 9inch RML gun at Fort Scratchley (1882-1891) Note the artillerymen using what looks like a surveying instrument to obtain range and baring to the target. It is also clear that loading the gun was quite an effort. (Snowball Collection, University of Newcastle)

Surprisingly the accommodation for the garrison had not been constructed although plans had been submitted in September 1883. Tenders for the work were not called until March 1885 and construction was completed in April 1886.<sup>56</sup>

It is not clear when the fort was officially named Fort Scratchley, but the earliest use of the term is in January 1887 in the *Newcastle Herald* concerning bathing near the fort. The fort's armament consisted of four 80-pounder rifled muzzle loader (RML) in a casement (similar to those constructed at Georges Head and Bare Island at this time) and three 9 inch RML guns in barbette. The 9 inch RML's would have had a range of about 6000 yards.

As far as can be ascertained the torpedoes were held in readiness but not deployed from c1885 and the staff were then moved from Newcastle to Sydney.<sup>57</sup> This may have been due to changes in torpedo technology.

## Changes to the defence of Newcastle

Scratchley gave evidence to the 1881 Royal Commission on the military forces of New South Wales in which he considered that Newcastle's defences were adequate against a moderate attack.<sup>58</sup> But in 1885 just as Fort Scratchley was nearing completion, Admiral Tryon, Commander of the Australian Naval Squadron visited Newcastle. He recommended that a second fort be established to guard the approaches to Newcastle Harbour, 'somewhere in the neighbourhood of Shepherds Hill', to bolster the defences of Fort Scratchley.<sup>59</sup> This is possibly the first time that a senior naval officer discussed coastal defences in NSW, and it was typical of Tryon's character as an unusually dynamic progressively thinking naval officer that he inspected the defences before reporting on them.

Another driver of change to Newcastle's defences was evolving artillery technology. With the failure of William Armstrong's breach loading designs of the early 1860s, the firm utilised its skills in iron and steel working to incorporate the advantages of new materials (irons and steels of varying composition) with rifling to improve accuracy in artillery. Armstrongs made RML guns and sold them quite widely to the colonial governments such as New South Wales. The RML type was developed to quite extraordinary sizes, allowing heavy shells to be projected to a greater range than the traditional cannon ball. They used vast amounts of gunpowder and this inspired attempts to develop gunpowder into a more effective propellant. RMLs were, however, cumbersome to load and thus the rate of fire was slow. Vast clouds of smoke from the gunpowder charge rendered any attempt a concealment pointless.

The embryonic science of operational research began to be applied to the results of a bombardment, which lead to the surprising conclusion that sea bombardment of a coastal fort resulted in very little damage to the actual guns; rather it was their crews that were killed or wounded and, thus, incapacitated the forts. This discovery prompted the design of forts and mountings that protected the crews.

The hydro-pneumatic (HP) carriage designed by Armstrongs married the company's expertise in hydro-pneumatic power (as demonstrated by the hydraulic cranes which serviced the coal loading wharfs at Newcastle) as well as their expertise in artillery. The carriage harnessed the recoil of the gun to swing it back and down beneath the parapet of the emplacement where it could be loaded and pointed. The swinging motion of the recoil compressed a hydraulic cylinder and this, once released, swung the gun up to fire. The gun – when seen from an attacker's point of view –

disappeared only to return to fire again, consequently making it a difficult target (apart from the large amount of gunpowder smoke).

However, this was only the carriage – the gun tube itself had been developed over the years. The advent of grain powder meant that the forces in the barrel were less and thus the barrel was lighter. Armstrongs had also developed the interrupted screw form of breech block which perfected the breech loading system. The immediate effect of this was that the process of loading the gun was far easier than loading the RMLs.<sup>60</sup>

While in the UK in 1883 Scratchley saw a demonstration of Armstrongs' HP gun and immediately saw its potential for the defences of NSW. As a result of Scratchley's endorsement, many disappearing guns were purchased for NSW and the other Australian colonies. Although some writers have seen the 'Disappearing Gun' technology as a form of 'con' perpetrated on the colonies by Armstrongs,<sup>61</sup> the reality is that the mounting was widely adopted throughout the Empire. There are examples in most of the Australian states, in New Zealand, Canada and in the UK itself (for example the Tyne<sup>62</sup> as well as in Thailand at the Phra Chulachomklao Fort and the Phi Sua Samut Fort.<sup>63</sup> The 'disappearing' principal was developed by the US Army into the disappearing carriage based on the use of counterweights rather than hydraulics and deployed during the Endicott phase of fortifications in the United States and in the Philippines.<sup>64</sup>

In March 1887, Major General John Richardson, commander of the NSW military forces reported that two 8 inch breech loading guns costing £5,300 each with their fittings had arrived along with most of their hydro-pneumatic carriages and arrived and been sent to Newcastle where they were placed in storage.

In 1889 it was decided to equip Fort Scratchley with four disappearing guns, three 6 inch BL guns on HP carriages replaced the existing 9 inch RML guns and one 8 inch BL gun on HP carriages was installed. The work involved major modifications to the emplacements and on 18 February 1889, the tender for this work by James Russell was accepted. The work included the construction of a new gun pit, just to the east of the casemate battery, and remodelling of the existing pits. The pits were deepened to nine feet eight inches, a casemated section to the rear of each gun was provided for the gun-crew, and new shell recesses and arms stores were constructed. Most of the lower level was not altered and existing shell-lifts were used.



Later, in 1898, the three obsolete 80-pdr RML guns in the casemate battery were replaced by three 1.5-inch Nordenfelt Quick Firing guns. These were used for anti-torpedo boat work as it was thought that the rate of fire of the larger guns would have been too slow to effectively engage very fast vessels. Two five-barrel Nordenfelt 45-mm machine guns were also added to the Fort's armaments for land defence.<sup>65</sup>

Torpedo defences had also been upgraded. On 30 March 1894 the *Newcastle Morning Herald* published a very complete description of a new plan of mine defence for Newcastle along with details of those from No. 3 company of the New South Wales Engineers who were training on the system. The mines were described as iron cylinders about two foot in diameter and three foot in height with a charge of 250lbs of gun cotton (nitrocellulose) with a detonating charge that was initiated by electricity. The mines were laid in groups of four in the main channel laid 'just inside the bar, and in such a position that a ship entering would be sure to come within the destructive area of one or the lot'.<sup>66</sup>

The mines were linked on an electrical circuit with the main cable running from the pilot boat harbour to Fort Scratchley. The mines were command detonated from a station inside Fort Scratchley.

From an observing station in the fort a man with a position finder would be watching and tracing the vessel's course. By a wonderful system in which electricity plays the most important part, the instrument silently follows the ship on her course until ship is over one of the group of mines. A pencil-shaped piece of metal on the point of the position finder then strikes a disc, completes the circuit, and the group of mines explodes instantaneously.<sup>67</sup>

The paper helpfully noted that 'The mines are always kept fully charged near the pilot boat harbour in the chamber built under the ground' and that the engineers were not based at Newcastle but had to travel up from Sydney and then organise to lay the mines.<sup>68</sup> The submarine defence was in situ until Federation.

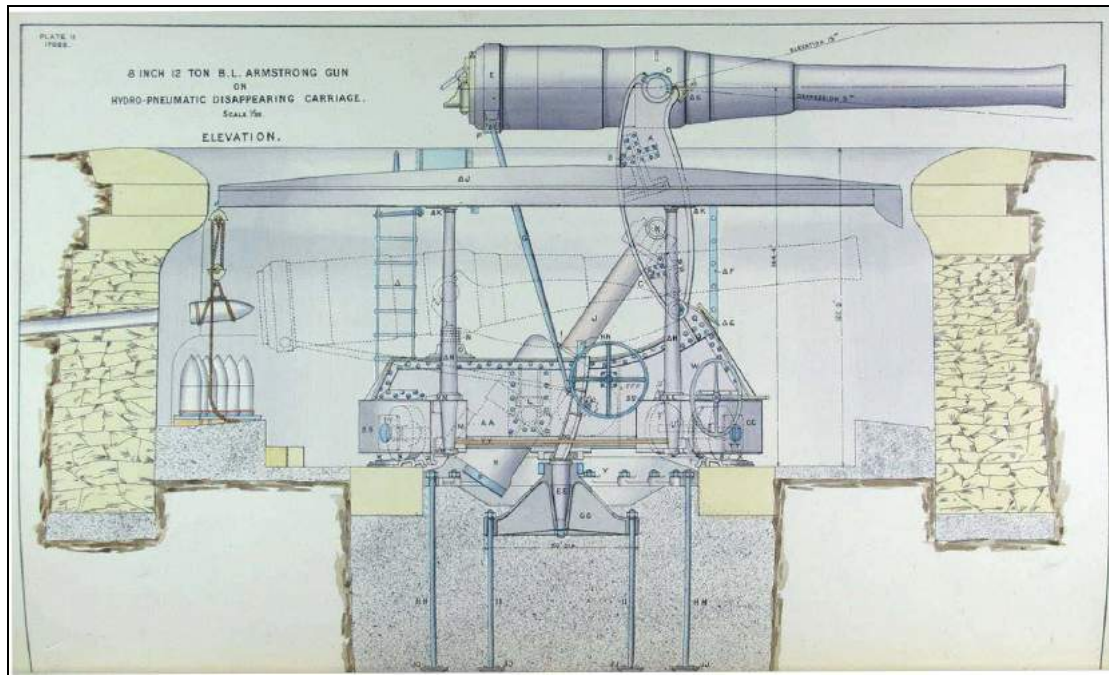


Figure 4 Diagram of an 8 inch gun on a hydro-pneumatic carriage<sup>69</sup>

Late in 1887, Major General H Schaw, Royal Artillery, in yet another report on coastal defences recommended that as well as siting one of the 8 inch guns at Fort Scratchley, the other should be sited at Shepherds Hill.<sup>70</sup> The Government acted to implement these recommendations and the land on Shepherds Hill was surveyed for a defence reserve by Staff Surveyor Francis J Gregso, 20 May 1889. Tenders were called to erect a 'Battery at Shepherds Hill, Newcastle', in March 1890. The lowest tender was by J. Russell who of course constructed the earlier works at Fort Scratchley and was in 1890 completing the modifications to that fort. On 25 March 1890, Colonel F R de Wolski, Director of Military Works, recommended Russell as the successful tenderer.<sup>71</sup>

Russell's work at Fort Scratchley was inspected as part of the Royal Commission into Defence Works which was an attempt to discredit the Colonial Architect by de Wolski. The concrete work completed at Fort Scratchley by Russell was inspected by cutting into it. The investigation of the Fort Scratchley concrete poured by them concluded that, though the work was careless including the insertion of old bricks instead of blue stone into the concrete mix, it was generally satisfactory. Inspection showed no settlement or cracks in the concrete.<sup>72</sup>

Work at Shepherds Hill was completed in 1892. Colonel F R de Wolski, Director of Military Works inspected the guns in 1891. Four test rounds were then fired to check the gun and mounting on the 17<sup>th</sup> May 1892. The Shepherds Hill gun was fired for the first time in service on 12 May 1894 during

a training exercise under the command of Lieutenant W Lyne. The gun seems to have fired intermittently in the following years as part of various training exercises.<sup>73</sup>

### **Newcastle Attacked!**

On the 6<sup>th</sup> April 1899 came the attack that Novacastrians had feared. At 9:30pm it was reported that the armoured cruiser *Ajax* had made landfall on the coast and was landing troops (presumably marines) on the Merewether Beach for the purpose of attacking the Newcastle forts in the rear.

After landing the troops *Ajax* then closed the Newcastle defences at Nobbys. There she fired off a rocket warn the land party that she was about to begin the attack. This naturally alerted the defence. Lieutenant-Colonel Kirkaldy commanding the forts, who immediately had the alarm sounded, and the guns manned. Although every man of the garrison was in his place in three minutes, it took some time to get the shields off the guns, and before a shot had been fired from the land the enemy's ship had commenced a brisk bombardment.

This fire and the use of rockets by the cruiser as signals to the land party gave away the enemy's position, and the 6in. guns then began to play on her. Her tactics were immediately altered. Without a sign, she took a turn southward again, and while the guns of the forts continued to belch out as if she had remained on her original course, she was engaged in describing a circle to the southward.

Crawling up the coast once more, the *Ajax* got well under the fort, and then let go again. A warm exchange of shots followed, and presently the enemy was seen to be on fire. Fire quarters were beaten on her, however, and the flames were quickly extinguished, without much damage having been done.

Rounding Nobbys, a torpedo-boat or something of that kind began to use her searchlights to pick out her course up the harbor, and this immediately brought down upon her a terrible fire from the Nordenfelt guns of the fort. Continuing her course, however, notwithstanding this rain of ball, she got within range of the barbette 80lb. gun mounted on the west side of the fortress for the purpose of protecting the mine field, and it sent several charges down into her already well-riddled hull.

That vessel, whatever she was, was annihilated by the Nordenfeldts, and then blown to smithereens by the barbette, so that there was no necessity for Captain Horsley and his submarine miners to

explode their mines, which in themselves could have polished off any enemy pursuing the course the vessel took in entering the port.

The alarm regarding the enemy was communicated immediately it was sounded, to the commandant, Lieut. Col. Ranclaud, at the field force camp on Newcastle racecourse, and the troops were at once called to arms, and remained on duty until the engagement with the fortifications was terminated.<sup>74</sup>

The account of the exercise has been quoted at length (with some artistic licence) to show how it was imagined that the defences of Newcastle were supposed to work. In some ways they parallel the attack of the 8<sup>th</sup> June 1942, the star shell gave away the position of I-21 and there was a delay in getting the shots in reply but presumably Lieutenant-Colonel Kirkaldy did not command in his pj's and of course the IJN was attempting to stir up the defences rather than invade.

Earlier, on the 6<sup>th</sup> April, the batteries at Fort Scratchley and Shepherds Hill practiced for an hour firing at towed targets. It was reported that each of the large guns during the afternoon used up 10 rounds of ammunition (6 minutes per round), and the Nordenfelt guns 15 rounds.<sup>75</sup> It is not clear whether Kirkaldy really commanded the two forts and commanded their fire as an integrated unit as communications would have been primitive. The longer range of the 8 inch guns would have been negated by darkness impeding visibility and once a fire solution had been acquired there was no effect way to communicate it. At a rate of fire of one shot every 6 minutes from the main guns (during which time an Armoured cruise would have moved a considerable distance, maybe a 1km at full speed) a hit on the *Ajax* would have been pure luck until she presented herself at point blank range.

### **Commonwealth Defence and what happened next**

With Federation in 1901 the Defence role undertaken by the individual colonies was transferred to the new Commonwealth along with state defence works on the 1 March 1901. Fort Scratchley Shepherds Hill were both included in the facilities transferred from NSW.

The Department of Defence has the assistance of various intercolonial meeting on Defence as well as the British Colonial Defence Committee which had regularly reviewed the various colonies defence plans since the mid-1880s. There was therefore no real change in threat evaluation but a

fairly blunt assessment of the nature of Australia's coastal defence was made with recommendations for inspection of the existing state of defences and then a reappraisal.

The general recommendations that emerged were to upgrade the defences to standardise on 6 inch guns on a central pivot mounting and to supply Depression Range Finders and electrical connections to each mount. Regarding Shepherds Hill, the report commented 'there is need of re-arming Shepherds Hill or retaining the 8" gun mounted there.'<sup>76</sup>

The 6 inch guns on a central pivot mounting was a rapid fire breach loading model with a rate of fire of 3-4 rounds per minute and a longer range than the 6inch and 8 inch guns it replaced. The Mk VII equipped Fort Scratchley in 1911 and equipped a new post-Federation fort, Fort Wallace just north of Stockton.<sup>77</sup> In the 1930s Fort Wallace was significantly upgraded to mount 9.2 inch Mk IX guns to act as counter-bombardment weapons and the whole of the defences were integrated into a 'fortress' with a command centres and plotting room so the whole of the defences could be fought by a single commander.

There was a major episode of 'creep' subsidence caused by collapses in the goaf of the Sea Pit Colliery whose workings were underneath Shepherds Hill. A report in 1906 outlined the impact of the subsidence noted that 'damage was done to Shepherds Hill fortifications, a crack in the concrete foundations throwing the big gun out of position by several inches'.<sup>78</sup> Effectively the gun was dismounted and could not be used until extensive repairs were made, but which were never undertaken as the mounting was obsolete. Shepherds Hill was later used as a battery and fortress observation post for deploying early models of surface and air radars.

The Newcastle's defences stood waiting for an enemy and as is well known, the enemy arrived on 8 June 1942 in the form of the IJN submarine I 21 which fired 34 shells at Newcastle (supposedly at the BHP steel works). After a delay Fort Scratchley's two guns fired two salvos, but none of the four shells hit the submarine, perhaps not surprisingly as it was a very small target.<sup>79</sup> However, the Newcastle defences withstood their trial.

<sup>1</sup> See Callen, Terry. *Bar Dangerous: A Maritime History of Newcastle*, Newcastle : Newcastle Region Maritime Museum in association with the Runciman Press and Varley, 1986; also Stewart, Ian. "Taming the River and the Sea: The Port of Newcastle." In *Shaping the Hunter: A Story of Engineers and the Engineering Contribution to the Development of the Present Shape of the Hunter Region, Its River, Cities, Industries and Transport Arteries*, edited by John Armstrong: The Newcastle Division of the Institution of Engineers, 1983.

<sup>2</sup> Governor King to Lieutenant Menzies, 30<sup>th</sup> April 1804, in Watson, Frederick (ed). *Historical Records of Australia*, Series 1, Volume V. n. Vol. V, 1915, pp 409

<sup>3</sup> Governor King to Lieutenant Menzies, 2<sup>nd</sup> July 1804, in Watson, Frederick (ed). *Historical Records of Australia*, Series 1, Volume V. n. Vol. V, 1915, pp 417

<sup>4</sup> Following a search through the *Historical Records of Australia* and the *Historical Records of NSW*. Notably, in the accounts of the achievements of the Commandants at Newcastle and of the Governors and in the Bigge report, the construction of fortifications at Newcastle were not mentioned.

<sup>5</sup> Bingle, John. *Past and Present Records of Newcastle, New South Wales*: Newcastle [N.S.W.] Bayley, Son and Harwood, 1873. p15.

<sup>6</sup> Later in 1863 the Harbourmaster D.T. Allen refers to the guns "buried in the sand"

<sup>7</sup> Turner, J. W., and Architects Suters. "Newcastle City Wide Heritage Study: Thematic History." *Newcastle, N.S.W.*: Prepared for Newcastle City Council by Suters Architects in association with Dr John Turner, 1997 pp2-4.

<sup>8</sup> Dangar, Henry. "Plan of the Town of Newcastle, Port Hunter, New South Wales" N.392 1823.

<sup>9</sup> See the articles in Armstrong, J. W., ed. *Shaping the Hunter: A Story of Engineers, and the Engineering Contribution to the Development of the Present Shape of the Hunter Region, Its River, Cities, Industries and Transport Arteries* Newcastle, N.S.W., Newcastle Division, Institution of Engineers, Australia, 1983.

<sup>10</sup> The Royal Navy organised coaling stations around the world and purchased coal to overcome this problem, other maritime powers lacked the resources to do this to any great extent.

<sup>11</sup> This scenario is discussed in all the reports on NSW defences from the 1860s up to Federation.

<sup>12</sup> *People's Advocate and New South Wales Vindicator*, Saturday 7 May 1853:9

<sup>13</sup> *An Act to authorize the formation of Volunteer Corps in the Colony of New South Wales and for the Regulation thereof*, 18 Vic No 8.

<sup>14</sup> *Sydney Morning Herald* Thursday 6 December 1855, page 8 "Insolvency Proceedings." *Maitland Mercury and Hunter River General Advertiser* 12 December 1855, 2.

<sup>15</sup> Kelly, L. B., ed. *Military of the Hunter: Citizen Defence Forces of Newcastle and the Hunter Valley, A History 1855-2005*, Eleebana, N.S.W.: Reserve Forces Day Hunter Region Council Inc., 2008, p13.

<sup>16</sup> "Newcastle." *Sydney Morning Herald*, 02 April 1857, 5.

<sup>17</sup> "Newcastle." *Sydney Morning Herald*, 27 May 1857, 5.

<sup>18</sup> *Naval and Military Defence of the Australian Colonies 1862*, paper in Col Sec Special Bundle, 4/703.2 Bound Papers Defence of the Colony, p 1.

- <sup>19</sup> Kelly, L. B., ed. *Military of the Hunter: Citizen Defence Forces of Newcastle and the Hunter Valley. A History 1855-2005* Eleebana, N.S.W.: Reserve Forces Day Hunter Region Council Inc., 2008, pp 13-14
- <sup>20</sup> This location is where the Volunteer Artillery practiced shooting see "Local News." *Newcastle Chronicle and Hunter River District News*, 21 December 1861 1861, 2.
- <sup>21</sup> N.S.W. Parliament. "Report from Select Committee on Harbour Defences." *Votes and Proceedings, N.S.W Legislative Assembly* Vol 2, no. 1863-64 (1863): 1041.
- <sup>22</sup> N.S.W. Parliament. "Report from Select Committee on Harbour Defences." *Votes and Proceedings, N.S.W Legislative Assembly* Vol 1, no. 1865 (1865): 721.
- <sup>23</sup> "Newcastle." *Maitland Mercury and Hunter River General Advertiser*, 04 August 1866, 3.
- <sup>24</sup> "Newcastle." *Maitland Mercury and Hunter River General Advertiser*, 04 September 1866 1866, 4.
- <sup>25</sup> "The Duke of Edinburgh in New South Wales." *Sydney Mail*, 14 March 1868, p 12.
- <sup>26</sup> See Sarty, R. F. *Coastal Artillery 1815-1914*. Canada: Museum Restoration service, 1988 for a concise summary of these developments.
- <sup>27</sup> Oppenheim, Peter. *The Fragile Forts: The Fixed Defences of Sydney Harbour 1788-1963*. Canberra, A.C.T.: Army History Unit, Dept. of Defence, 2004 pp75-82
- <sup>28</sup> N.S.W. Parliament. "Dispatches Respecting Guns and Ammunition, Laid on the Table." *Votes and Proceedings, N.S.W Legislative Assembly* Vol 1, no. 1865-66 (1865): 858.
- <sup>29</sup> "Harbour Defences." *Newcastle Chronicle*, 31 December 1870, 2.
- <sup>30</sup> But not published until 1877, presumably on the grounds that it is a good idea not to publish the latest defence report in case the enemy purchases it through the NSW Government printer.
- <sup>31</sup> These were barrel sized containers of nitro-cellulose (guncotton) which were fired by an electrical charge, these days they would be called mines. They were not left "in situ" but were placed when a defence emergency occurred. They were quite dangerous to their operators as nitro-cellulose was quite reactive.
- <sup>32</sup> N.S.W. Parliament. "Defences of The Colony: Second Progress Report of the Defence Commission, 1871." *Votes and Proceedings, N.S.W Legislative Assembly* Vol 3, no. 1876-77 (1876-77): 121.
- <sup>33</sup> "Inspection of the Hunter River." *Newcastle Chronicle*, 01 November 1870, 2.
- <sup>34</sup> "Newcastle." *Maitland Mercury and Hunter River General Advertiser*, 07 January 1871, 2.
- <sup>35</sup> "Local and General News." *Newcastle Chronicle*, 23 December 1873, 2.
- <sup>36</sup> "Local and General News." *Newcastle Chronicle*, 29 January 1874, 2.
- <sup>37</sup> Ian McGibbon. 'Jervois, William Francis Drummond', *Dictionary of New Zealand Biography*, first published in 1993. Te Ara - the Encyclopedia of New Zealand, <https://teara.govt.nz/en/biographies/2j2/jervois-william-francis-drummond> (accessed 23 January 2019), Robin W. Winks, 'Jervois, Sir William Francis Drummond (1821-1897)', *Australian Dictionary of Biography*, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/jervois-sir-william-francis-drummond-3856/text6133>, published first in hardcopy 1972, accessed online 23 January 2019

<sup>38</sup> Oppenheim, Peter. *The Fragile Forts: The Fixed Defences of Sydney Harbour 1788-1963*. Canberra, A.C.T.: Army History Unit, Dept. of Defence, 2004 p107.

<sup>39</sup> "Newcastle." *Sydney Mail and New South Wales Advertiser*, 19 May 1877, 622.

<sup>40</sup> N.S.W. Parliament. "Defences of The Colony: Second Progress Report of the Defence Commission, 1871." Votes and Proceedings, N.S.W Legislative Assembly Vol 3, no. 1876-77 (1876-77): 121, p7.

<sup>41</sup> N.S.W. Parliament. "Defences of The Colony: Second Progress Report of the Defence Commission, 1871." Votes and Proceedings, N.S.W Legislative Assembly Vol 3, no. 1876-77 (1876-77): 121, pp 18-19.

<sup>42</sup> "The Defences of Newcastle." *Newcastle Morning Herald and Miners' Advocate*, 12 April 1878: 2.

<sup>43</sup> "Tenders for Public Works." *New South Wales Government Gazette*, 15 June 1880 2907.

<sup>44</sup> Carey, Lewis , and R. S Mort. *Fort Scratchley, Newcastle, New South Wales*. 2nd Edition ed. Newcastle Council of the City of Newcastle, 1886, p11.

<sup>45</sup> "Our Defences." *Evening News*, 08 April 1878 1878, 2.

<sup>46</sup> "Torpedo Defence for Newcastle." *Newcastle Morning Herald and Miners' Advocate*, 21 March 1878, 2.

<sup>47</sup> "NEWCASTLE." *The Kiama Independent, and Shoalhaven Advertiser*, 12 November 1878: 3.

<sup>48</sup> "Newcastle Defences." *Sydney Morning Herald*, 14 May 1878, 6.

<sup>49</sup> "The Newcastle Fortifications." *Newcastle Morning Herald and Miners' Advocate*, 18 October 1880: 2.

<sup>50</sup> "The Fortification Works and the Old Coal Workings under Flagstaff Hill." *Newcastle Morning Herald and Miners' Advocate* ,07 May 1881, 8.

<sup>51</sup> *Newcastle Morning Herald and Miners' Advocate*, Tuesday 24 May 1881, page 2

<sup>52</sup> "The Newcastle Fortification Works." *Newcastle Morning Herald and Miners' Advocate* 28 May 1881: 4.

<sup>53</sup> *Newcastle Morning Herald and Miners' Advocate*, Saturday 25 February 1882, page 5

<sup>54</sup> *Newcastle Morning Herald and Miners' Advocate*, Tuesday 4 April 1882, page 3

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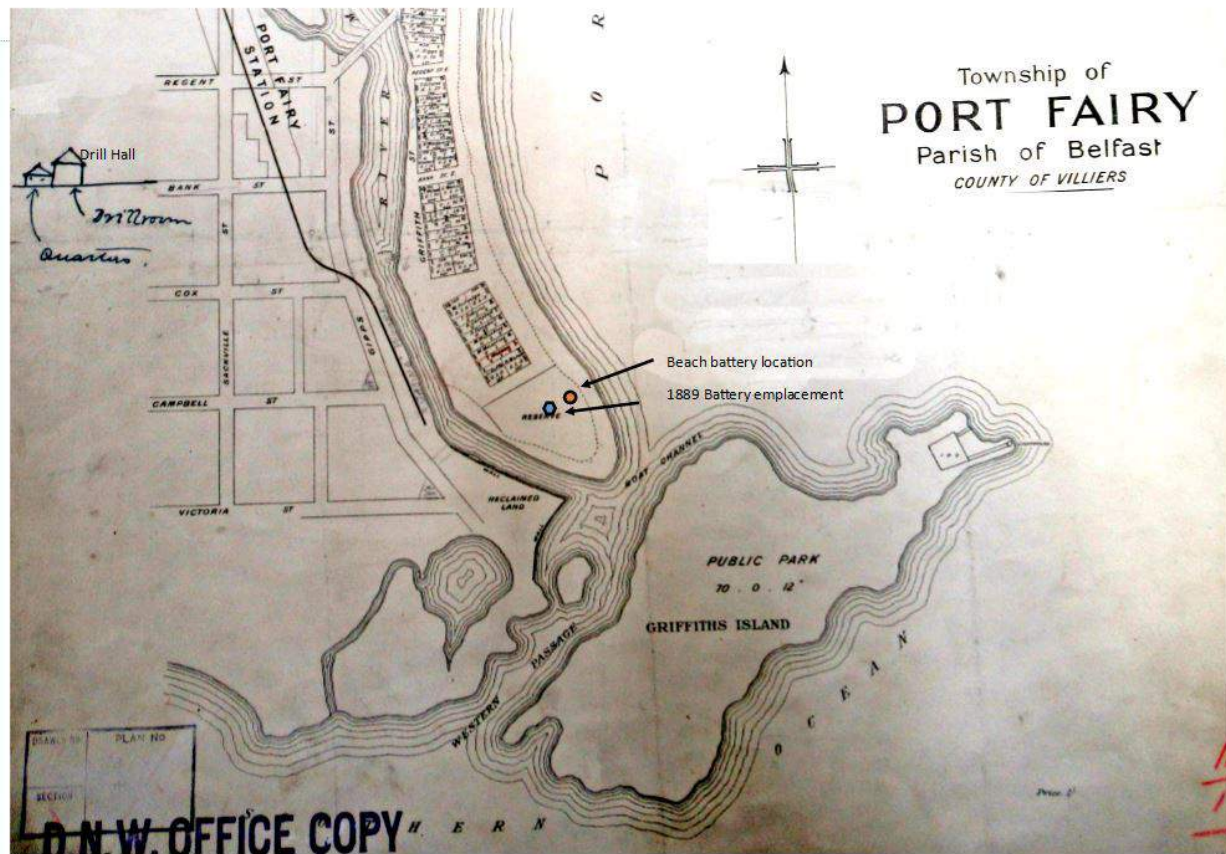
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# PORT FAIRY'S COASTAL DEFENCES

## BATTERY HILL



Port Fairy coastal defences, located at Battery Hill noted, with the location of the Orderly (Drill) Hall noted on the original map.

NAA, B3712, (11/13/4) (11/2/1908)

Port Fairy coastal defences, located at Battery Hill noted, with the location of the Orderly (Drill) Hall noted on the original map. NAA, B3712, (11/13/4) (11/2/1908)

## **EXISTING SIGNIFICANCE STATEMENTS**

The Battery Hill fort at Port Fairy is listed on the Victorian Heritage Database. However, a substantial amount of the significance description details is disputed so it is not reproduced here apart from a small section that is included at the end of the following article.

# **PORT FAIRY'S COASTAL DEFENCES – BATTERY HILL**

Marten A Syme OAM

Local and maritime historian

Marten A Syme, OAM is the author of several books on maritime and historical themes and several nominations to the Victorian Heritage Register since locating his current residence at Port Fairy. Conservation of the collection of guns at Port Fairy, and other heritage buildings and artefacts has been a continuing commitment.

The gazettal of An Act for Volunteer Corps in Victoria in July 1859 provided for a volunteer rifle company to be formed at Belfast (later named Port Fairy) and, following a petition from the residents, the Chairman of the Belfast Municipal Council held a meeting in the *Star of the West Hotel* where 22 young men were enrolled.<sup>1</sup> The establishment grew, and volunteers were equipped with uniforms and rifles, and given drill and target practice, and basked in community support because of the isolation of the town if any tangible threat were to appear. The proposed camp for all the established corps in April 1862 at Little River (near Melbourne) was washed out, but that December, the three Western Corps (Portland, Belfast and Portland) assembled for a bivouac at Portland, with the visiting corps and the sailors of HMCS *Victoria* assaulting the host town upon their arrival.<sup>2</sup> The Rifle Volunteers were disbanded in 1864, although a corps of artillery volunteers, of 'not more than 50 effectives nor less than 25' at each of these Western towns was formed in 1866. The rifle companies were too small and isolated. Volunteers trained to operate artillery would be more effective in any invasion threat or response to bombardment. Following a camp at Sunbury, the token contribution of a 32 pounder smooth bore muzzle loading (sml) cannon, mounted of trucks, was delivered in June 1867.<sup>3</sup>

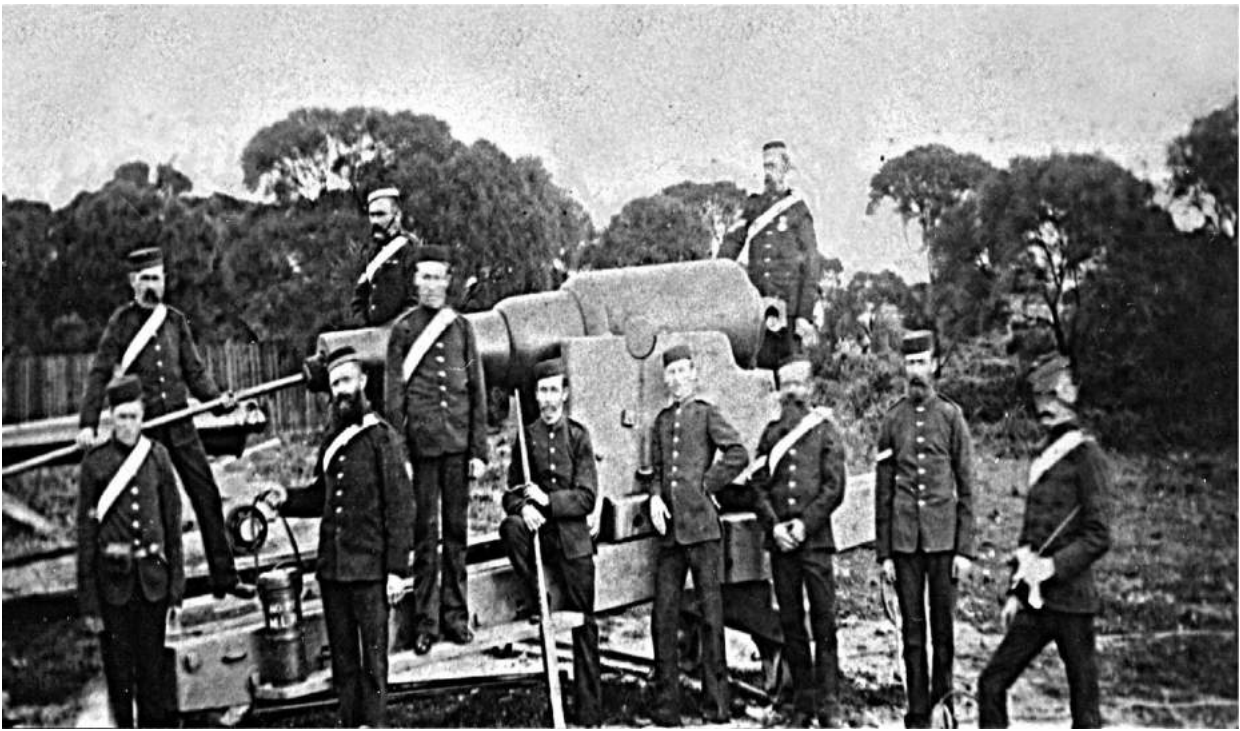
The gun was placed in front of the prominent sand dune carrying the signalling flagstaff, (that dune to be later termed 'Battery Hill'), which was the only practical location for any landing party. The corps maintained their enthusiasm for skirmishing manoeuvres by attacking Warrnambool one evening, testing the efficiency of both corps, and a military band was later established.<sup>4</sup> Attendance at regular parades fell away, however, as the officer, Lieutenant William Barrett, used his position to verbally abuse and diminish the men at public parades, before he departed the town at the same time as a deficiency in the corps moneys was discovered.<sup>5</sup> Captain H B Lane, Police Magistrate, was requested to assume duties as commanding officer, and volunteer numbers rose again. In May 1872, a second 32 pounder, mounted on a traverse slide which offered easier tracking of a target was delivered. By 1874, there were 74 'effectives' available, and 103 volunteers, including bandsmen, enrolled. The gunnery positions were consolidated with a timber platform built over a crushed limestone base, with hardwood walls, and the redundant immigration barracks was re-erected behind the guns to store the equipment.<sup>6</sup>

The local corps faced a few emerging problems. The evening parades for the Volunteers were held in the old Agricultural Societies' hall, which provided inadequate space for drill, the storage of rifles and equipment or an artillery piece for gun crew training. A Royal Commission in Melbourne recommended that the annual expenditure by the government of £10,000 on volunteer corps was of 'very little use'

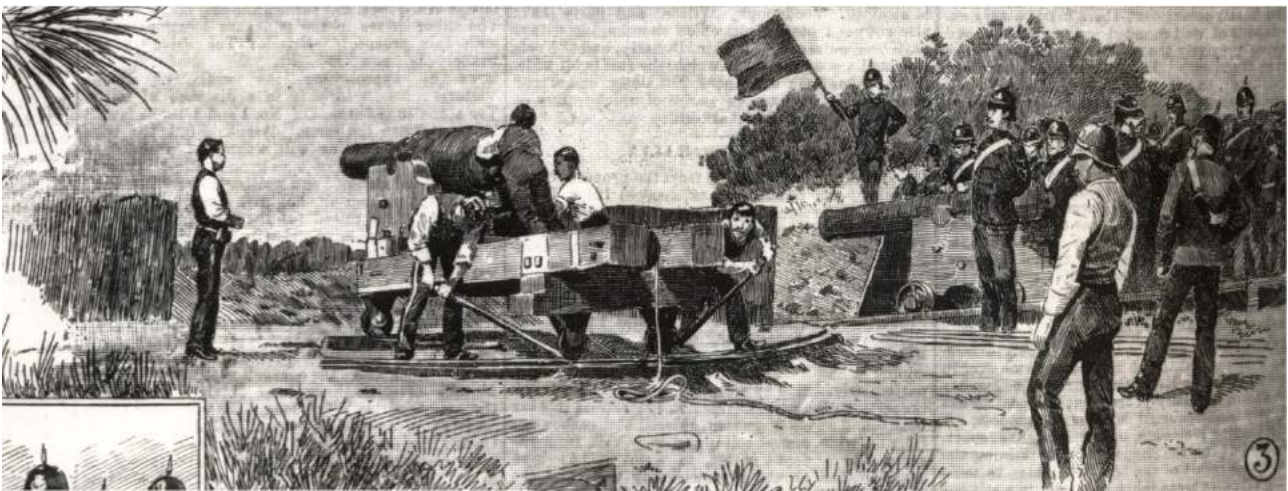
and recommended a militia structure be instituted. Departmental administration was inadequate, with insufficient ammunition held for any rifle practice that year, and the Lancaster rifles were 'old-fashioned'. The editor of the *Belfast Gazette* noted that the government could have purchased up-to-date Martini-Henry rifles two years previously, and that while the Melbourne militia corps were 'well supplied', the regional corps were equipped with 'antiquated ordnance' and that the 'back door was open'.<sup>7</sup> The Commission's comments resulted in some action to remedy deficiencies, with the supply of rifled muzzle loading 80 pound (rml) guns to the Western defences, together with Martini-Henry rifles. Beach erosion, however, threatened to undermine the battery location. The Department of Public Works refused to undertake any protective measures, suggesting that the government had no need to expend funds to protect the battery.<sup>8</sup>

Momentum within the corps was sustained by regular rifle shooting competitions, parades and Volunteer balls, and the challenge increased with artillery competition camps from 1883, initially at Queenscliff, and between the various corps, following Russian activity in Afghanistan. The local corps was now known as the Belfast Battery, 2<sup>nd</sup> Brigade, Garrison Artillery, and was provided with a new Orderly room (built for the stables of a local hotel), with an extension for training gun crews during evening parades, and new elevated fortifications were established. The weapons located on the beach dune needed bore maintenance and the foundations provided for the gun carriages were inadequate to absorb the firing recoil. The intended supply of a pair of improved 80 pounders, mounted on iron traverse platforms, required well-designed defensive emplacements, centrally designed, with the gun emplacements located on the elevated sand hill where the signalling flagstaff was positioned. The adjacent emplacements were composed of eight basalt segments embedded in substantial foundations to carry the traversing circle rails. Concrete walls provided frontal protection for the guns with return walls containing recesses for operating equipment. The walls were then battered on the exterior with soil and turf, effectively hiding the emplacements when viewed from the sea (see plan). The flagstaff was relocated to the Lighthouse compound on Griffiths Island. Two 68 pounders were also delivered for gunnery training. The new 80 pounder guns were delivered in April 1889 and laboriously hauled up the dune and placed on the racer tracks to offer an intersecting field of fire of 80 degrees, but a total arc of more than 185 degrees.<sup>9</sup>





The gun crew and an 80 pounder gun on a traversing slide, located adjacent to the 32 pounder on trucks (behind the gunners) at Mills Battery, c.1877. Note the fence (rear) and Casuarina growth. PFHS 62.05.012



Lithograph from the *Town & Country Journal*, derived from a photograph by Alexander Plummer in 1888. The site is the Mills Battery above (the 32 pounder is on the right) at East Beach. The operating crew are only six men. *Town and Country Journal*, 5/5/1888, p.910

In April 1888, a competition to measure efficiency, accuracy and gun drill between the gun crews was held at Port Fairy with the Warrnambool militia attending, the competitive event marked by a parade through the town. The touring reporter and a photographer from the Sydney based *Town & Country Journal* were co-incidentally present and were taken aback by such an activity in the Victorian provincial town, and the report and image contributions (reproduced as linotype impressions) provided a record of the competitive rivalry, normally conducted without publicity. Following the practice, the

squad from Warrnambool was entertained with hospitality at a local hotel before their charabanc returned.<sup>10</sup>

Less than a year after the placement of the 80 pounders, which had been designed exclusively for the Victorian Government, it was reported that the guns were to be relocated to defend Westernport, where a battery of 40 pounders were due for replacement. The Western battery guns were to be replaced with 'heavy breech loading guns', but the transfer (at least at Port Fairy) did not take place. In 1891, the Defence Department issued a General Order advising that the establishment for specific militia batteries was to be limited, with a total of 495 enrolled for the five units within Port Phillip, 68 for Warrnambool, 63 for Portland and 56 at Port Fairy. The Military Commandant commented that only 30 men were required to work the 80 pounders, although 40 men were probably required to maintain a regional militia detachment. Within two years, the prospect of disbandment of the Western batteries was evident. To support their retention, the Portland Council (supported by Port Fairy) proposed a local establishment of 40, with a £5 per head per annum as payment, without success.<sup>11</sup>

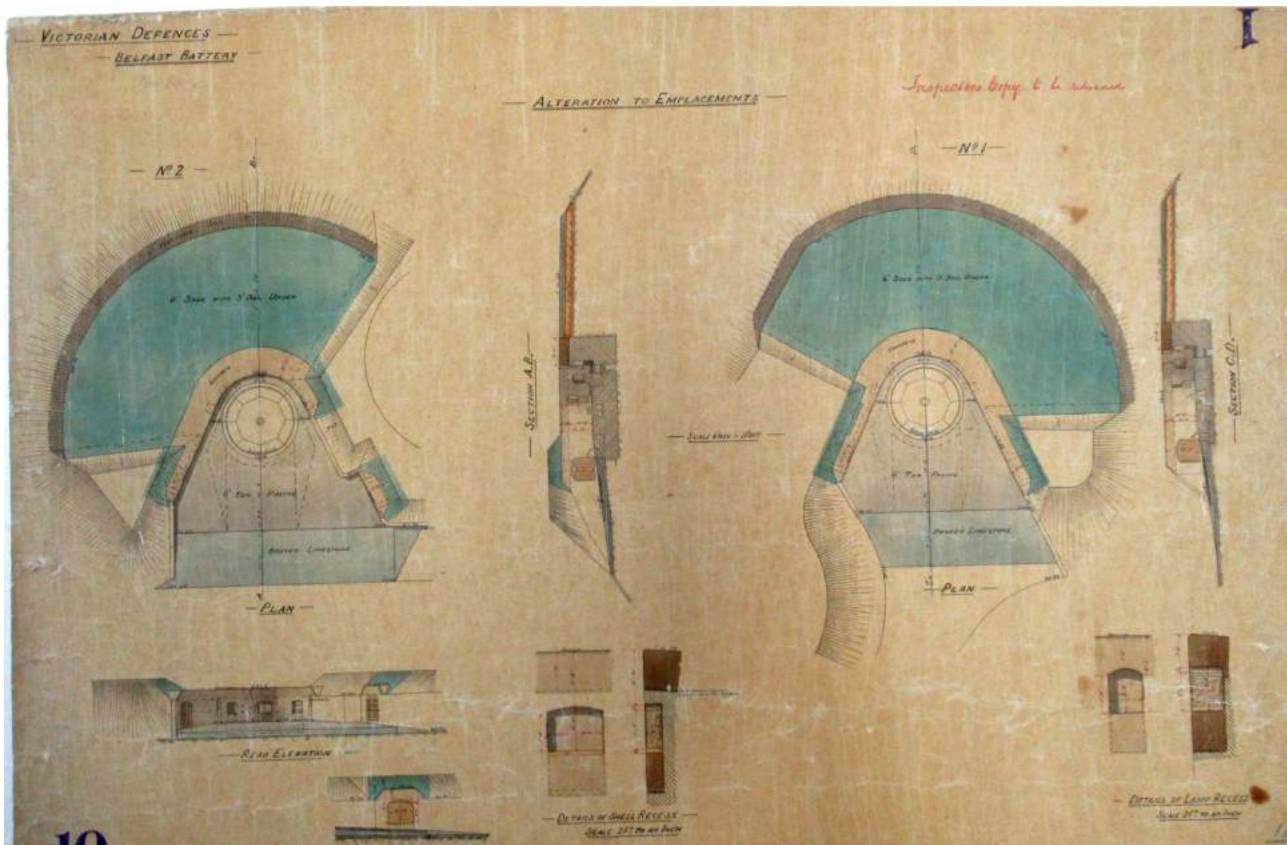
The dissolution of the Western Artillery corps was only a matter of time following Federation, with defence administration passed to the Commonwealth. In June 1904, orders were circulated for disbandment, and the Port Fairy garrison artillery corps was dismissed in July 1904. It was reportedly to be supplied with a field gun and horse team 'in the near future'.<sup>12</sup> The 'near future' was undefined, and the garrison was supplied with a 4.7" breech-loading gun, but it was withdrawn a year later, and not replaced. The gun was not mounted for coastal defence at the emplacements.<sup>13</sup>

The Commonwealth supported the formation of a Naval Brigade for volunteers in Port Fairy in 1905, and Captain Cresswell visited the town to evaluate recruits, preferably fishermen/lifeboatmen, aged between 18 and 35, for a three year engagement.<sup>14</sup> Twenty-nine were selected to form a Naval brigade, with a complement of 50 hoped for, a Senior Cadet Corps envisaged with two cutters for boat drill, and a Boys Naval Brigade was also established.<sup>15</sup> The Orderly Room was transferred to the Naval Department, and the gunroom to be used as a gymnasium. Despite annual visits by naval vessels, the cost, poor behaviour by cadets and diminished interest by volunteers was relieved by the call-up of the reserves for military service in 1914. In 1920, closure of the training area was proposed and, despite the Borough Council objection, the naval activities ceased in 1920.<sup>16</sup>

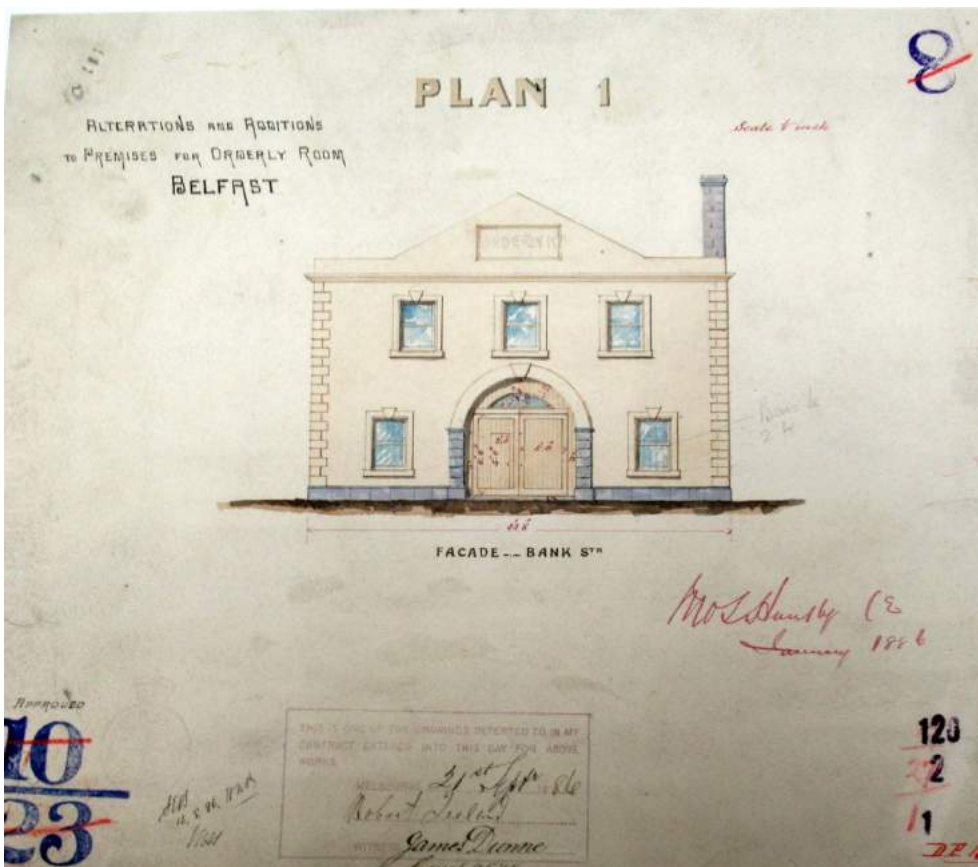


The two obsolete 32 pounder cannon were offered to the Borough of Port Fairy in August 1889, which were accepted and they were placed at the two entrances to the Botanic Garden as historic relics. The larger and surplus 68 pounders on traverse slides were offered in 1911, but the Borough was concerned, given their considerable size and complications arising regarding relocation from the Drill Hall and transport to King George Square, about accepting them until offered some assistance. The 80 pounders remained within the emplacements, but all the weapons suffered from exposure, and community disinterest until the Victorian Sesquicentenary in 1984, when the timber carriage guns were assembled at a site below the large guns at Battery Hill. The teak carriages and slides for the older weapons were in relatively good condition, although incremental decay from external exposure led to financial support from the Victorian Government for their professional restoration. One of the 80 pounder guns is regularly discharged each week in January, and on special occasions.

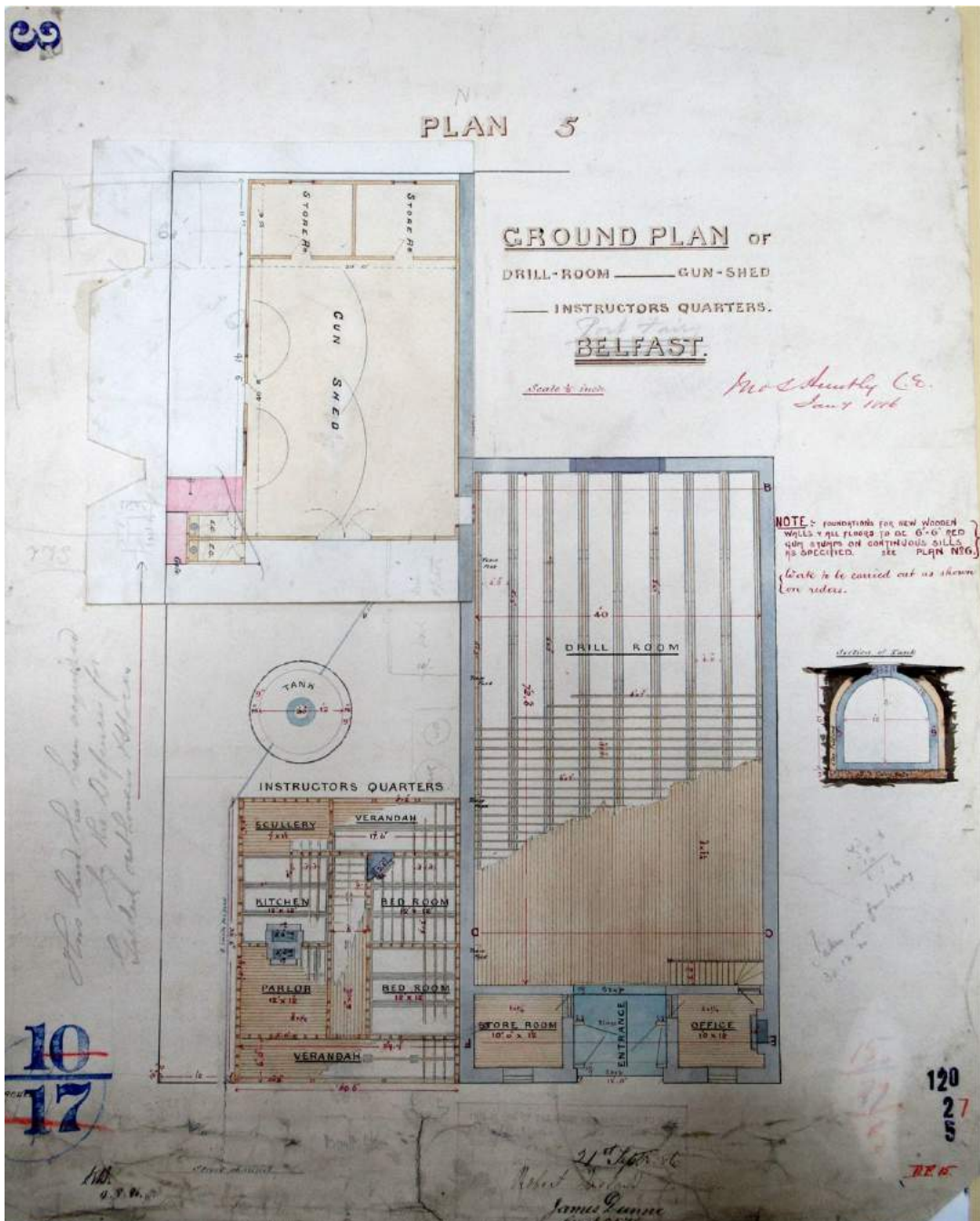
Battery Hill has outstanding heritage value for the nation because of the place's potential to yield information that will contribute to an understanding of Australian natural or cultural history. The Victorian Heritage citation notes 'the guns and emplacements have architectural, historical and scientific (technological) significance to the State of Victoria. ... Battery Hill, Port Fairy, is of historical significance for its association with the early development of defence in the Colony of Victoria. Battery Hill is of scientific (technological) significance as an important collection of guns used in the nineteenth century. The collection is surpassed only by the collection at Queenscliff Fort.'<sup>17</sup> The weapons represent the complement of guns provided for the regional coastal township, supported by the population, located at the original defensive site, and, comparatively, in substantially preserved condition. The emplacements and the guns are Recorded on the Victorian Heritage Register (H 1534) and Classified by the National Trust of Australia (Victoria) and accessible for public inspection.



The alterations to the Port Fairy gun emplacements at Battery Hill provided a concrete parapet height, recesses and gun mounting foundations, 1889 NAA B3712/0 (451917)



The Port Fairy Drill Hall (Orderly Room) in Bank St, with proposed alterations for the militia's use. Note the large drill room, gun room and dwelling for the Instructing Sergeant. NAA B3712/0 (10568141)







The southern gun emplacement c.1959, with vegetation and weeds growing within but a fine view to the south east over Griffiths Island. SLV (Lillian Powling collection)



The 80 pounder rml being fired with a gunpowder cartridge, before absorbed spectators. c. 2011

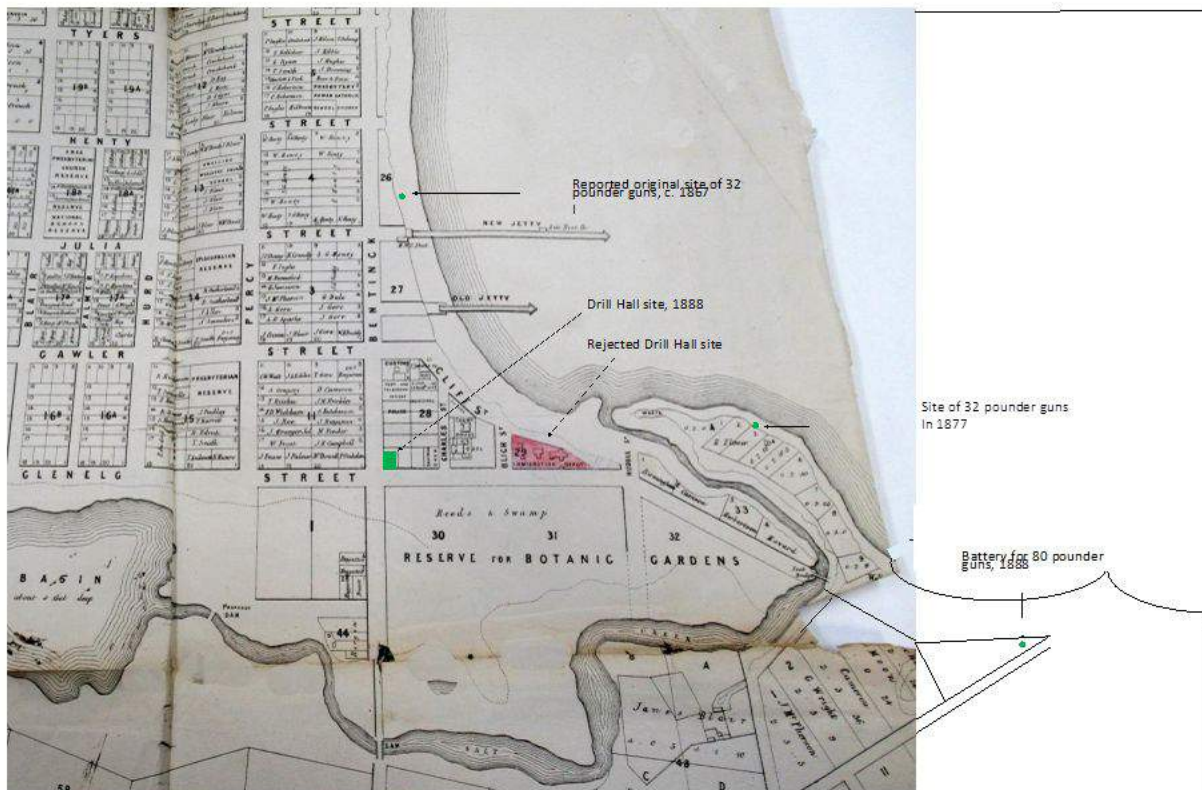
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- <sup>2</sup> *Banner of Belfast*, 15/4/1862, 22/4/1862, 2/12/1862, 9/12/1862, *Belfast Gazette*, 16/8/1861, 6/9/1861, 13/9/1861,
- <sup>3</sup> *Belfast Gazette*, 13/7/1866, 4/4/1867, 4/7/1867, 20/6/1867
- <sup>4</sup> *Belfast Gazette*, 4/2/1869
- <sup>5</sup> *Belfast Gazette*, 19/5/1869, 27/5/1869, 15/2/1870, 22/12/1870
- <sup>6</sup> *Belfast Gazette*, 14/7/1872, 21/8/1874, 25/9/1874
- <sup>7</sup> *Belfast Gazette*, 21/5/1875, 17/9/1875,
- <sup>8</sup> *Belfast Gazette*, 8/10/1875, 28/4/1876, 27/3/1877, 17/4/1877, 7/9/1877
- <sup>9</sup> *Belfast Gazette*, 22/4/1879, 8/12/1885, 16/4/1886, 7/12/1886, 26/4/1887, 5/7/1887, 30/8/1887, 16/4/1889, 4/6/1889
- <sup>10</sup> *Port Fairy Gazette*, 29/4/1890, 31/7/1891, 9/6/1893
- <sup>11</sup> *Port Fairy Gazette*, 29/7/1904
- <sup>12</sup> *Port Fairy Gazette*, 13/7/1906
- <sup>13</sup> *Port Fairy Gazette*, 9/5/1905
- <sup>14</sup> *Port Fairy Gazette*, 11/6/1907, 1/10/1907, 7/7/1908
- <sup>15</sup> *Port Fairy Gazette*, 8/1/1909, 2/7/1909, 21/5/1912, 4/4/1913, 7/9/1914, 27/9/1920, 4/11/1920
- <sup>16</sup> Heritage Victoria, citation "Emplacement and Guns, Battery Hill, Port Fasiry (H1534), (online data upgrade project, 2004)

# PORTLAND'S COASTAL DEFENCES



Map of Portland, extended to show the location of batteries and Drill Hall.

(Original map NAA B3766 (333783) 1893/1700

## EXISTING STATEMENT OF SIGNIFICANCE

The Portland Battery and Gun are on the **Victorian Heritage Database** and are described as follows.

[NB some details of this statement are disputed, but it is included because of its overall recognition of the significance of the site.]

### What is significant?

The Portland Battery, with a concrete gun emplacement, underground magazine and 80-pounder gun, is located on an elevated site at the entrance to Portland Bay. The battery was constructed in 1889-90 as part of the implementation of British recommendations for the defence of Victoria, and the design was based on British prototypes. The batteries at Portland, Port Fairy and Warrnambool were designed to act as an integrated system of defence for south-west Victoria's strategically important bays, ports and industries in response to a perceived threat from Russian warships. The contract for the first stage of the battery, the magazines, upper chamber and parapet wall, was let to George Weeks for £1982/12/0 in 1889. The second stage, the relocation of the old lighthouse on the site and the construction of the gun emplacement, was carried out by Messrs Nelson & Marshall in 1890 for £2436. The 80-pounder gun was cast at the Royal Gun Factory at Woolwich, England, in 1866, and was originally purchased for the defence of Port Phillip, but was moved here in 1890. Following Federation, ownership of the battery was transferred to the Commonwealth in 1901 for the compensation of £963. The battery was manned by volunteer militia until 1904, when the group was disbanded. From 1941 the battery was used by the Volunteer Air Observer Corps, but was abandoned as a defence facility after the war. The site became derelict but the battery and the gun were restored as part of the Victoria's 150th anniversary celebrations in 1984.

The Portland Battery consists of an underground concrete magazine above which is a large grassed earth rampart and a concrete gun emplacement. Built into the concrete wall around the gun are a number of shallow recesses for lamps and wood-lined cupboards for cartridges. Wooden doors marked 'Magazine' and 'Lamp Passage' lead into separate foyers from which ladders lead down through vertical shafts to the magazine chamber and to the lamp passage parallel to it from which the magazine was lit. The design of the battery, with its thick concrete walls, earthen rampart and the careful separation of the munitions from sources of ignition, is typical of nineteenth century battery design. The original 80 pounder gun (manufacture number 25) is a rifled-muzzle-loader cannon, still on its original wrought iron, steel and gun-metal carriage and traversing slide mounted on a traversing rail. Marks include 'R F G' over 'No 25' over '1866', on the left hand trunnion (the cylindrical projection from the side of the barrel that rest on the carriage and forms a pivot point); the barrel has a Victoria Regina (VR) cypher; and the carriage and slide bear the mark 'MC'. The remains of an emplacement for a World War II Volunteer Observer Corps aircraft searchlight are located nearby.

This place is located on the country of the Gunditjmara and Eastern Maar people.

### How is it significant?

The Portland Battery is of historical and architectural significance to the state of Victoria and the original 80 pounder gun is of scientific (technological) significance.

## **Why is it significant?**

The Portland Battery is of historical significance for its association with the early defence of the colony of Victoria and as a reminder of the importance of coastal defences in the early colonial period. It demonstrates the dependence of the young colony on British military expertise and the defence strategy of artillery bombardment of ships from coastal emplacements, and on the British manufacture of artillery. It reflects the importance of Victoria's south-west harbours to the colony, and the reliance for their defence on the ports of Portland, Port Fairy and Warrnambool, which operated as a single artillery garrison. The Portland Battery is of historical significance for its association with the activities of the volunteer militia, who played an important role in the life of Victorian coastal towns.

The Portland Battery is of architectural significance as a fine example of British military design of the period. It is an intact example of the fortifications built in Victoria's coastal towns as part of a broader British colonial defence strategy in the 1880s. The design of the Battery shows careful consideration of the handling and storage issues for explosives and is indicative of battery and magazine practices of the nineteenth century.

The 80-pounder gun is of scientific (technological) significance as a now extremely rare example of nineteenth century naval artillery.



## **PORTLAND'S COASTAL DEFENCES**

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Local and maritime historian

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## The Coastal Battery Guns

Consistent with the batteries at Warrnambool and Belfast, Portland was supplied with a trucked 32 pounder smooth bore muzzle loading gun in June 1867, to provide the means to develop efficient operation by the Portland detachment of the Volunteer Artillery Corps, with some defensive capacity to defer, or delay, assault on the town by either marines or bombardment. The gun was obsolete, slow to load and fire, and had an effective range of 1,300 metres. Three volunteers displayed initiative and fabricated a replica weapon from timber with metal components, to allow practice at the evening parades at the drill hall. A second 32 pounder was delivered in 1872, mounted on a traversing platform, which considerably assisted gun laying, and which was similar to the deliveries to the two other west coast batteries.<sup>1</sup>

Following the recommendation of Sir William F D Jervois in 1877, the Western Batteries were equipped with one smooth and one rifled barrel cannon, the latter an 80 pounder on a timber carriage with a traverse slide, which was delivered in March 1877. There was no report of the delivery of the second 80 pounder, or of the 68 pounders for gunnery practice, although two examples of the latter calibre are found at Portland, although only one of the traverse slides remain.<sup>2</sup>



The Portland Militia and Band on Parade, 1889

Portland Historical Society



The Portland Volunteers attending instruction at the "dummy" gun, c.1877

Portland Historical Society

The re-equipment of the Western Batteries with new 80 pounders on iron carriages (with an effective range of 3,500 metres) was to be enhanced by their siting at elevated locations. The new guns were delivered to Portland in February 1889, taken through the town and made 'ready for service as soon as possible' for a competition between the three Western Volunteer garrisons during the Portland Exhibition in March 1889. Each garrison was to perform drill and fire six rounds within ten minutes at a target 1,550 metres distant.<sup>3</sup>

The rifled muzzle loading RML's were provided just as improved breech loading guns were being adopted. The 5" RBL (rifled breech loading) Armstrong gun fired a 50 lb shell a maximum 6,500 metres and the gun crew had better protection. The Portland garrison was promised such a weapon in 1890, and the efforts of their MLA, Donald N McLeod, resulted in the arrival of the gun in late 1899, replacing an 80 pounder that was withdrawn and reportedly sent to Queenscliff.<sup>4</sup> Following the disbandment of the militia corps in 1904, the 5 inch Armstrong RBL was also removed, leaving the obsolete 80 pounder within the emplacement.<sup>5</sup>

### **Location of the guns**

The location of the 32 pounder guns was variously reported as being 'in front of Henty's gate' (in Bentinck St) or 'at (Whaler's) Bluff'.<sup>6</sup> John Coode's plan for port development of 1877 shows the battery located on the sand spit by the Salt Creek.<sup>7</sup> The improved artillery led the Department of Defence to seek the agreement of the Departments of Lands and Survey and Trade and Customs for the location of the new 80 pounder guns in the garden surrounding the lighthouse, which required the relocation of the light and keepers' quarters to a new site in December 1888. The defence works included an underground magazine, with a distribution lobby above, while the emplacements were built with a 7 foot (2.1 metre) parapet wall.<sup>8</sup> The location was not entirely satisfactory, as the firing blast concussion damaged the emplacement wall, while a land slip in 1896 required the laborious dismounting of the gun to reduce risk (possibly the reason for the removal of the second 80 pounder).<sup>9</sup> The 68 pounder practice weapons were placed in the gun room of the new Drill Hall following their arrival, together with the 32 pounder, until these guns were distributed to the Municipal Council. One of the 68 pounders was located in the Memorial Triangle by the Council Office, and the other, mounted on a traverse slide, transferred to the Battery area in 1922. The 32 pounder was located in the Botanic Garden until 1984, when the trucked carriage was rebuilt, with new wheels. The 80 pounder was transferred to Bendigo and reconstructed by Ordinance apprentices and the gun painted.<sup>10</sup>

The premises used for drill, rifle training and storage of equipment was initially the disused Immigration Barracks, followed by a building in Bentinck St, before moving again, but this latter building was too small for drill manoeuvres if the numbers attending exceeded 50. New quarters were approved and built at the corner of Bentinck and Glenelg Streets, and a fine timber Orderly Room, with attached gun-room, was completed for £1,825 in 1888. The building was later used by the Naval Brigade, before their disbandment, and later leased as a picture theatre until 1937. The building was acquired by the Portland Council in 1971, and now houses the local State Emergency Service establishment and Council stores.<sup>11</sup>

## **Establishment**

The Portland Volunteer Rifle Corps was formed in September, 1859, consistent with similar rifle corps at Belfast and Warrnambool. Following dissolution in 1861, the Portland detachment of the Royal Victorian Volunteer Artillery was created, with 80 names offered in the first week of formation, and the expectation of a contingent of 100 recruits. Following their first camp at Sunbury in 1867, the small cannon arrived, and the local Corps commenced regular drill and weapons training. In 1870, the government required a more formal structure, and raised a remunerated militia unit (and encouraged the volunteers to transfer), and provided a drill instructor to improve discipline and efficiency. Recruits had to be 5'8" (1.73 m) in height, between 19 and 45 years of age and commit to regular training. A band was formed (usual with military corps in the Western towns), which reinforced the popularity of the uniform and voluntary defence service, and a rifle club followed.<sup>12</sup>

Operating the muzzle loading weapons required a crew of ten, and the Defence Department therefore reduced the establishment for each coastal militia corps to 50, accompanied with a reduction in pay. The perceived threat of possible invasion or bombardment having passed, plus government financial stringency following the economic depression of the 1890s, led to debate about the value of the regional corps. The Western garrisons were cancelled in April, 1904, despite objections from the respective municipal councils.<sup>13</sup>

The Corps was equipped with inefficient and worn out Lancaster rifles in 1867, which were, and they were replaced with the Martini-Henry rifle in 1875, and the Martini Enfield in 1900.<sup>14</sup> The Volunteers had a jacket and trousers of 'Artillery Blue' with yellow facings, a pill box cap with gold lace band and a white shoulder strap and cartouche. In later years, the Militia paraded in blue tunic with a red collar and piping and yellow facings on the cuffs, trousers also in blue with a red

stripe, a colonial pattern blue helmet and white shoulder belt and cartouche. In contrast to the dun coloured men's clothes of that time, this attire provided a visual feast for onlookers.<sup>15</sup>

With the disbandment of the Militia, a Boys Naval Brigade was established, and in 1907, a Naval Brigade, which sought fishermen and lifeboatmen, to provide a trained reserve for the Navy. Both were disbanded following the end of World War One. The battery site was occupied during World War Two for air observation, given the commanding view, and a searchlight was located close by. The isolated site lost its scenic attraction when tall grain silos were subsequently built between the site and the bay, although the battery sites' importance was recognised with the celebrations for Victoria's sesquicentenary at Portland in 1984. A Steering Committee secured a State Government grant of \$64,400, plus a \$11,500 contribution from the Council and a community contribution, to finance the reconstruction of the 80 pounder cannon and site works. The subterranean magazine has succumbed to water penetration and is now closed.<sup>16</sup>

The Orderly and gun room in Bentinck St is recorded in the Victorian Heritage Register for its architectural and historical significance. The design was by the Public Works Department and provides evidence of the importance of the volunteer artillery Corps in the larger Western Victorian port towns. The 32 pounder cannon, mounted on trucks, and now located at the Battery site (with the 80 pounder), is also recorded in the Victorian Heritage Register for its historical and scientific (technical) significance as an example of early naval artillery.



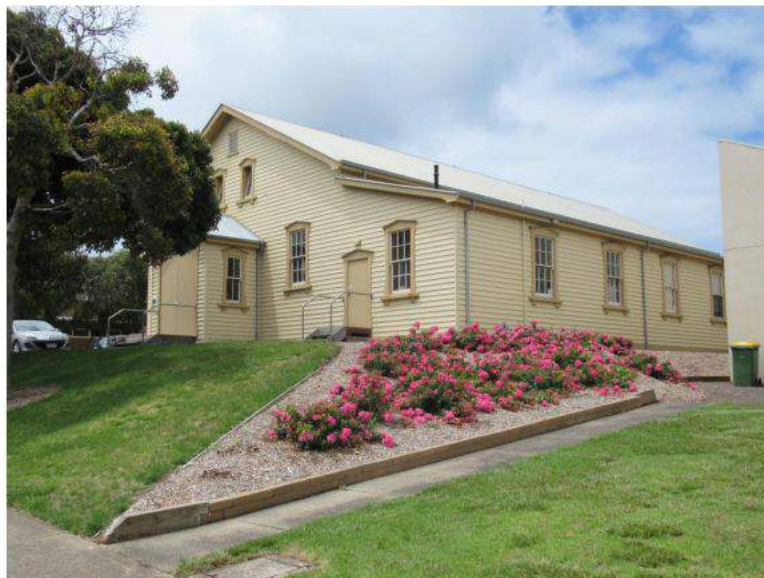
Above: An 80 pounder mounted on the traverse slide and timber sliding carriage, located on the racer rails with a timber fence to enclose the battery.

History House, Portland



Above: The remaining 80 pounder mounted on an iron carriage, in the emplacement built in 1888, but the weapon's field of fire has been occluded by the later grain silos for the port.

Marten Syme, 2018



The Portland Orderly Room, December 2018, built for its purpose of Militia drill in the building visible (offices on the right) with the gun room out of vision behind the building.

Marten Syme

<sup>1</sup> *Portland Guardian*, 29/4/1867, 8/6/1868, 18/1/1876

<sup>2</sup> *Portland Guardian*, 15/2/1876, VP&P, V.32, 1877/78, Vol.3, 10/1877, re *The Defence of Harbours of Warrnambool and Belfast* (Sir W F D Jervois)

<sup>3</sup> *Portland Guardian*, 18/2/1889, 25/2/1889, 27/2/1889, 6/3/1889

<sup>4</sup> *Portland Guardian*, 13/2/1890, 17/2/1890, 25/8/1899, 15/9/1899, 20/4/1904, Bennett, Gwen, *Portland's Historic Battery (1889)*, Portland, Bennett, Gwen & B A & J M Wallace, 1994, p.28

<sup>5</sup> Bennett, Gwen, p.28,

<sup>6</sup> *Portland Guardian*, 18/1/1876, 11/7/1888

<sup>7</sup> Learmonth, Thomas, *The Story of a Port*, Melbourne, The Premier Printing Co, 1960, p. 132, Bennett, Gwen, p. 27

<sup>8</sup> NAA, B3756, 1888/3402, Bennett, Gwen, p.22,23

<sup>9</sup> *Portland Guardian*, 28/1/1891, 15/7/1896

<sup>10</sup> Bennett, Gwen, p. 29, 33, 26

<sup>11</sup> Bennett, Gwen, p. 10, 33, NAA B3756, 1889/2745

<sup>12</sup> *Portland Guardian*, 29/4/1867, 29/9/1870, Bennett, Gwen, p.6, 13, 15,17

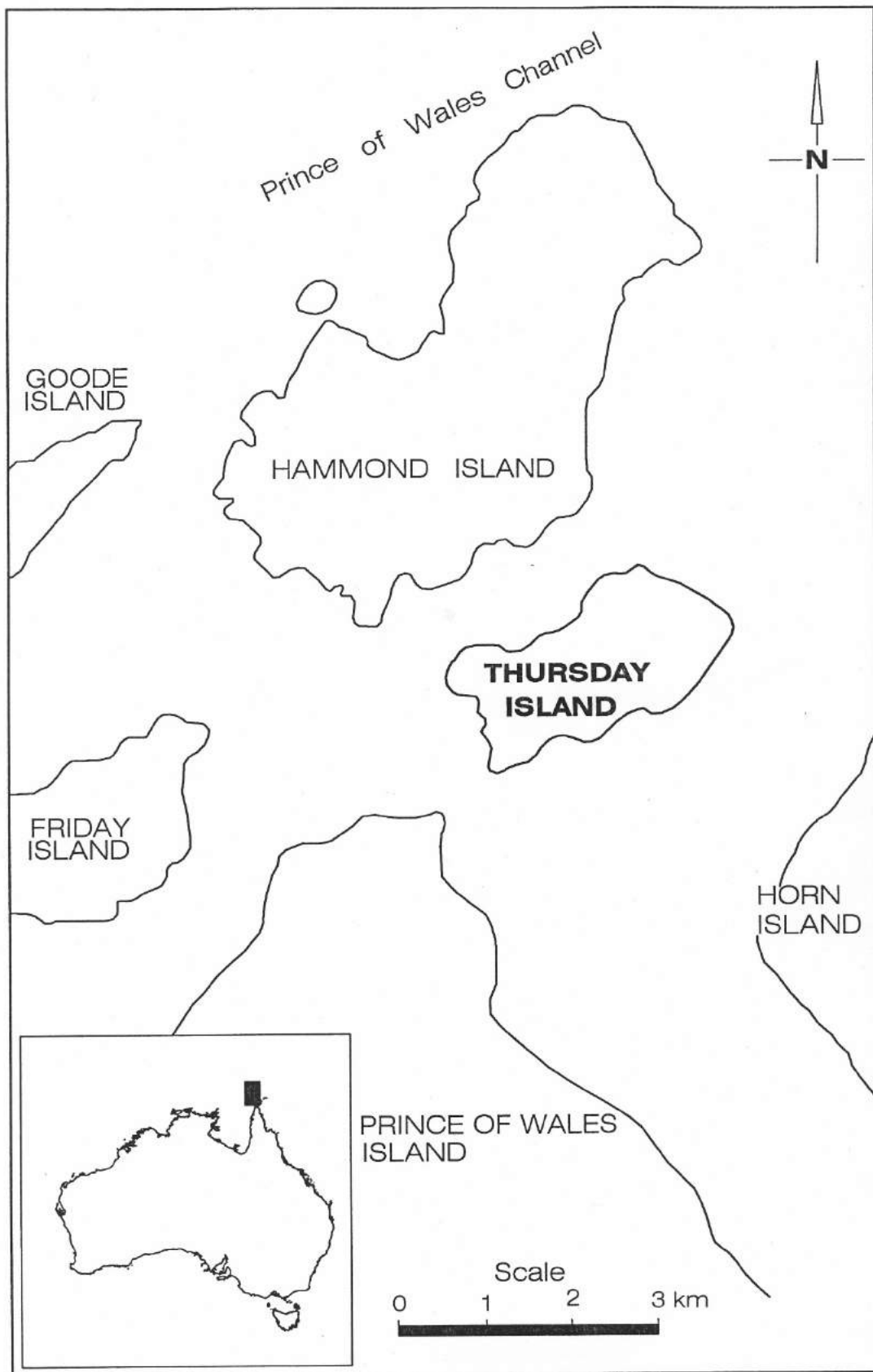
<sup>13</sup> *Portland Guardian*, 20/4/1904, Bennett, Gwen, p.20, 21

<sup>14</sup> *Belfast Gazette*, 21/5/1875, 17/9/1875, Bennett, Gwen, p. 20

<sup>15</sup> Bennett, Gwen, p.9, 14

<sup>16</sup> Bennett, Gwen, p.21, 26

## GREEN HILL FORT – THURSDAY ISLAND





# GREEN HILL FORT – THURSDAY ISLAND

Green Hill Fort on Thursday Island is on the **Commonwealth Heritage List** where its significance is described as follows:

## General Statement of Significance

Green Hill Fort is important in Australian military history as a strategic coastal defence installation in the period of transition from British to Australian responsibility for defence. The Fort, is one of only two forts where all Colonies agreed to fund construction. The 1885 confrontation between Britain and Russia, which almost resulted in open conflict, galvanised the Australian colonies to jointly fund construction of the fortifications, and these represent an important and uncommon instance of pre-Federation Colonial cooperation on defence in the 'national' interest. The three 6-inch BL gun emplacements on their sunken working platforms behind protective abutment walls, and associated structures are an intact example of 19th century military fortifications developed when the Australian colonies were assuming responsibility for national defence, are an important part of Australia's military history. As a result the place has a predominantly intact array of representative 19th century features, and is an important example of the characteristics of 19th century Australian defence fortifications. Green Hill Fort has significant heritage value for its associations with Colonel Sir W F D Jervois and Lieutenant-Colonel Peter H Scratchley, whose reports to colonial governments formed the basis of defence planning in Australia from the late 19th century, and with Major Druitt RE of the Queensland Permanent Artillery who was in charge of the works at Green Hill Fort.

## Criterion A Processes

Green Hill Fort is important in Australian military history as a strategic coastal defence installation in the period of transition from British to Australian responsibility for defence. The three 6-inch BL gun emplacements on their sunken working platforms behind protective abutment walls, and associated structures are an intact example of 19th century military fortifications developed when the Australian colonies were assuming responsibility for national defence. As such they are an important part of Australia's military history. There has been little subsequent alteration to the fabric of the fort, and this facilitates an appreciation of the work of Jervois, Scratchley and Druit, and its importance in Australian military history.

## Criterion B Rarity

Green Hill Fort is significant as an uncommon instance of Colonial cooperation in national defence. A number of coastal forts were built in Australia during the second half of the 19th century and early 20th century. However, Green Hill Fort, is one of only two forts where all Colonies agreed to fund

construction. The 1885 confrontation between Britain and Russia galvanised the Australian colonies to jointly fund construction of fortifications at Green Hill Fort, and these represent an important and uncommon episode of pre-Federation Colonial cooperation on defence in the 'national' interest.

### **Criterion D Characteristic Values**

A number of coastal forts were built in the second half of the 19th century and early 20th century and these forts share the characteristics of typical late 19th century British fortifications established at colonial outposts. The design and layout at Green Hill Fort followed the general design, but unlike other coastal fortification no major adaptations have occurred to the fortifications or other structures in response to changing military technology. As a result the place has a predominantly intact array of representative 19th century features, including embankments and a terreplein on which the gun batteries were mounted. There were also external gun emplacements, with working platforms sunk behind protective abutment walls, together with associated structures including sunken observation bunkers, tunnels and tracks for the munitions trolleys that serviced the gun emplacements. Green Hill Fort is an important example of the characteristics of 19th century Australian defence fortifications.

### **Criterion H Significant People**

Green Hill Fort has significant heritage value for its associations with Colonel Sir W F D Jervois and Lieutenant-Colonel Peter H Scratchley, whose reports to colonial governments formed the basis of defence planning in Australia from the late 19th century, and with Major Druitt RE of the Queensland Permanent Artillery who was in charge of the works at Green Hill Fort.

**The Great Southern Land Thematic Paper** (2004) proposed that the site might have values for the National Heritage List.

### **Summary of Significance**

Green Hill Fort, erected in 1893, is historically important as a defensive fortification erected in the colony of Queensland as a consequence of early inter-colonial cooperation on defence resulting from the withdrawal of British military forces by 1870, the growing importance of steam shipping and the importance of the international shipping routes to all colonies.

The construction of the forts arose from inter-colonial meetings and was jointly funded by the colonies prior to Federation. The Federation Conference of 1890 had appointed a Colonial Defence Committee to inspect and report on the fortification of Albany and Thursday Island and also Port Darwin. In 1891 the Committee recommended proceeding with the first two but not Port Darwin. Construction of the Green Hill Fort was completed in 1893 when it was garrisoned by a Queensland Permanent Artillery contingent. All colonies contributed to the cost except Tasmania.

This joint funding clearly demonstrates the perception of the colonies that defence of the major sea routes linking Australia with Europe and Asia was a matter beyond the capability of individual colonies, and foreshadowed a key element in the transfer of powers to the Commonwealth at Federation in 1901.

The Thematic Paper proposed that these values might be found under criteria a) and b)

**Criterion a)**

Green Hill Fort, erected in 1893, is historically important as a defensive fortification erected in the colony of Queensland as a consequence of early inter-colonial cooperation on defence resulting from the withdrawal of British military forces by 1870, the growing importance of steam shipping and the importance of the international shipping routes to all colonies.

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**Criterion b)**

Green Hill Fort is directly comparable only with the Albany Forts in WA, as they share the historical context of being built by inter-colonial cooperation to protect international shipping routes. As such the site is uncommon.

## **Green Hill Fort, Thursday Island**

Gordon Grimwade

Adjunct Senior Lecturer, Archaeology Dept, Flinders University SA

Gordon Grimwade is a consultant historical archaeologist/historian and Adjunct Senior Lecturer at Flinders University. He was Project Manager of the Centenary of Federation Green Hill Fort Conservation in 1999 - 2001 and more recently undertook conservation works at the World War Two King Point anti-aircraft battery on nearby Horn Island. When not pursuing interests in military and migrant history Gordon writes on history for younger readers in North America and has also published widely in professional journals. He is a John Oxley Fellow, Queensland State Library; Fellow of the Royal Geographical Society (UK) and a former Member of the Queensland Heritage Council.

The remote but strategically important and vulnerable colonial outpost of Thursday Island lies within the domain of the Kaurareg people of the southern Torres Strait. European history infers the island was uninhabited when Henry Chester arrived there in 1877, as Police Magistrate, Sub-Collector of Customs and Harbour Master, to establish a government settlement. In fact, its limited water resources meant that it was only opportunistically occupied up to that time.

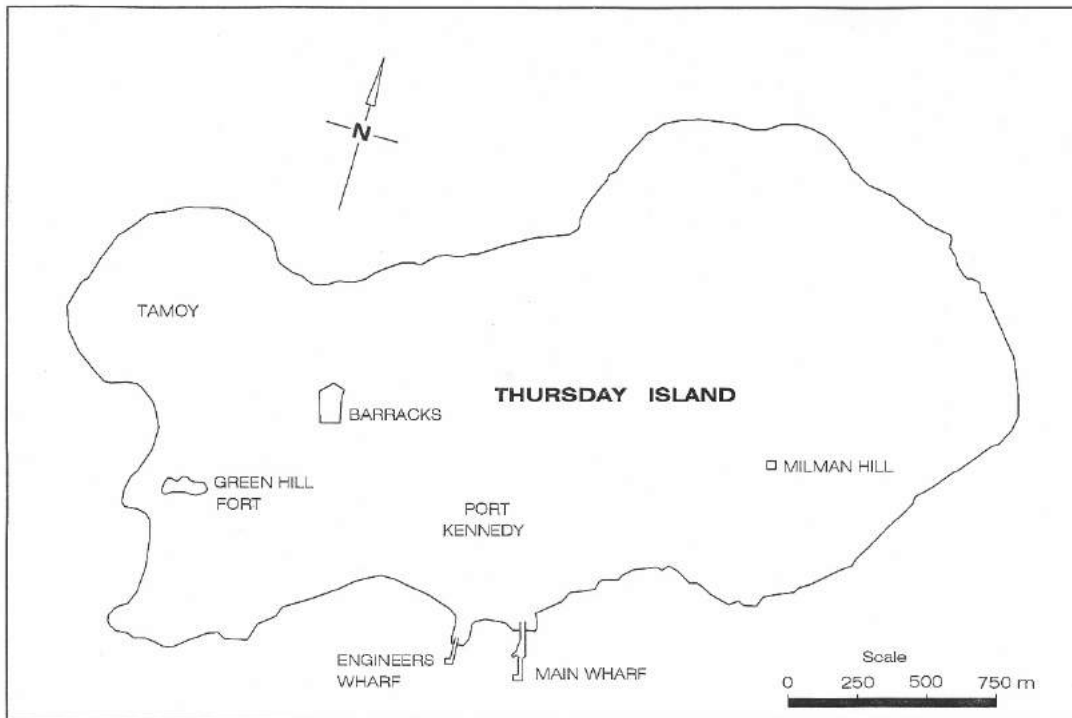


Figure 1. Thursday Island Showing the location of Green Hill Fort and Victoria Barracks

A deepwater channel through the Torres Strait that flows just to the north of Thursday Island made it strategically important for steamships plying between the remote Australian colonies and Asia in particular. Ships heading along those trade routes could restock with coal from the supply hulks moored in nearby, sheltered bays. Those same supplies would have been invaluable to enemy shipping attacking the southern Australian colonies and therefore justified military protection.

The 1877 review of the defence needs of the Australian Colonies by Sir William Jervois R.E., K.C.M.G., C. B.<sup>1</sup> and Lt Col Peter Scratchley R.E.<sup>2</sup> recommended the fortification of the island as part of a network to be progressively established around the Australian coast.<sup>3</sup> In 1881 Scratchley recommended fortification of Thursday Island.<sup>4</sup> Lengthy debate culminated in 1885 when it appeared that war with Russia was almost inevitable. In April 1885, as part of a widespread 'call out to active service', some twenty-four volunteers from the Queensland Naval Brigade were deployed from Brisbane to Thursday Island 'for the protection of the Coal Hulks at that station'.<sup>5</sup> It also fuelled

recognition that federating the Australian colonies would require immeasurable improvements to Australian defence systems.

A Committee of Officers comprising military delegates from most Australian Colonies and under the Chairmanship of Major General Tulloch, Commandant of the Victorian Forces, visited Thursday Island in April 1891.<sup>6</sup> It was subsequently determined that the core personnel of the fortification should comprise two officers and 48 other ranks of the Queensland Permanent Artillery, to be supplemented by 250 (infantry) in time of war'.<sup>7</sup>

By this time plans were well advanced to construct permanent fortifications on Thursday Island. The fort construction team, under the direction of Major Edward Druitt, Royal Engineers<sup>8</sup> and foreman George Cryle<sup>9</sup>, started work in mid August 1891 and completed the work in May 1893. Their role was to carve a strategic defence base out of an exposed, rocky hilltop on a 3.5km<sup>2</sup> island that was devoid of a permanent water source. That they achieved it on time and, apparently, within the budget of £23 053 (\$46 106) is testimony to their skills particularly when Thursday Island received 1346mm of rain in the first five months of 1892 and 1738mm for the corresponding period the following year.

The fort was excavated from the rocky hilltop with the waste used to build the outer ramparts. A mass concrete and drystone walled fortification was set into the hilltop. Beneath the central parados, five rooms, encased in 600mm thick mass concrete, provided ammunition storage. The general storeroom, shell store, cordite room, lamp room and artillery store were built initially. Druitt's team also constructed a 25 by 15 feet (7.6 x 4.6m) timber and corrugated iron, hipped roof, guardhouse over an underground water tank with a capacity of 20,000 gallons (c. 91,000 litres) near the fort entrance.

There was wide-ranging debate over the nature of the fixed weaponry for Green Hill Fort coinciding with widespread discussion about the nature of Imperial coastal artillery. During the 1860s rifled breech loading (RBL) guns were preferred but 'in the 'nineties the breach-loader made its come-back and swept all muzzle-loaders into limbo for ever'.<sup>10</sup> Unsurprisingly the British were keen to pass off 'eight obsolescent guns - four rifled muzzle loading (RML) seven inch guns and four sixteen pounders'.<sup>11</sup> This was strongly opposed by the colonial defence forces and it was eventually agreed to provide three more modern six-inch breech-loading guns. Two Mark VI and a Mark IV were supplied from the Elswick Ordnance Company owned by Sir William Armstrong. Lt Hamilton

Tunbridge and a team of eighteen members of the Queensland Defence Force installed the six-inch guns in February 1892.<sup>12</sup> The guns, each weighing around 10 tonnes, had a range of 8.4 km thus, effectively, covering all approaches to Thursday Island's harbour. They were supplemented with nine pounder field guns, deployed on the adjacent hillslopes. A 10-barrel Maxim 0.45-inch machine gun was parapet mounted and is now in the collections of the Museum of Victoria.<sup>13</sup>

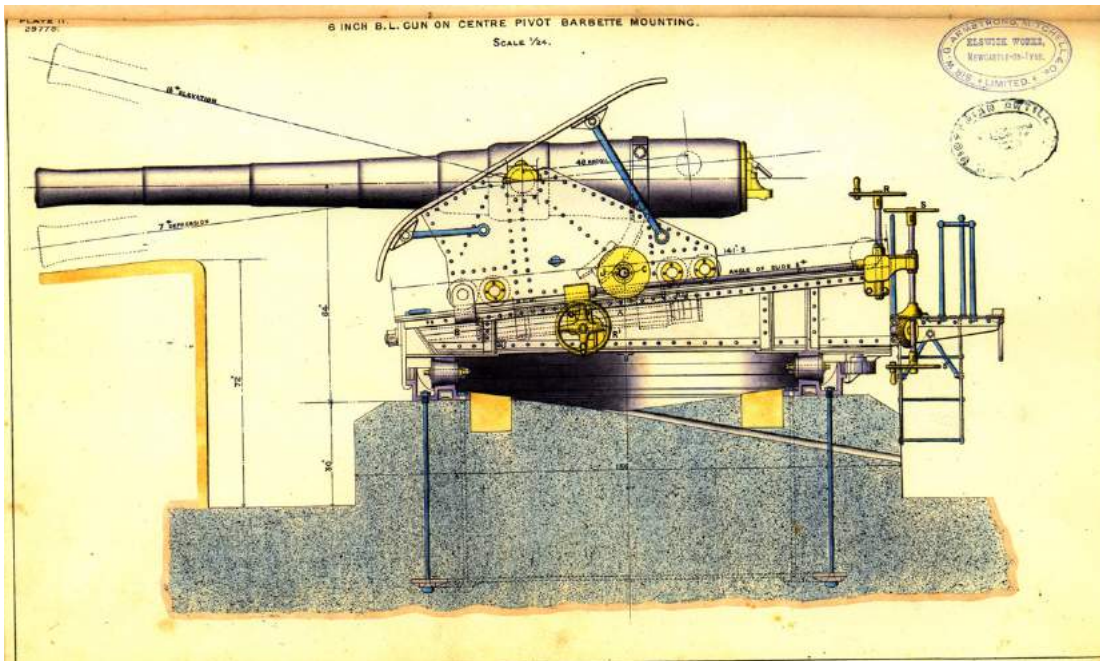


Fig 2. Profile view of six-inch BL gun similar to that installed on Green Hill Fort (Source: 'Instructions for 6 inch rifled breech loading Armstrong Gun and Automatic Centre Pivot Barbette Mounting. c.1895 – 1900', Courtesy of Royal Australian Artillery National Museum Library)

Range firing guidance was by means of a Depression Range Finder (DRF) system.<sup>14</sup> DRF station no. 1 was constructed on a hilltop 100m to the northeast and linked for much of the way by a stone pitched trench and communications landline. DRF station no. 2 was within the southern end of the parados to the rear of guns 2 and 3. Their purpose was to enable the large guns within the fort to more accurately establish the target's position. Such technology was relatively new. Captain H S S Watkins, Royal Artillery, developed the technique, which relied on triangulating the position of the target from known vantage points.

Outer defences comprised two barbed wire fences. These were constructed of steel angled posts with 6 horizontal strands of barbed wire through which further strands were crisscrossed to make narrow, but formidable, four feet high barriers against advancing infantry. Several 'fox holes' were dug in the northern hillslope, which would have been the most likely to have been the focus of a land-based attack on the fort.



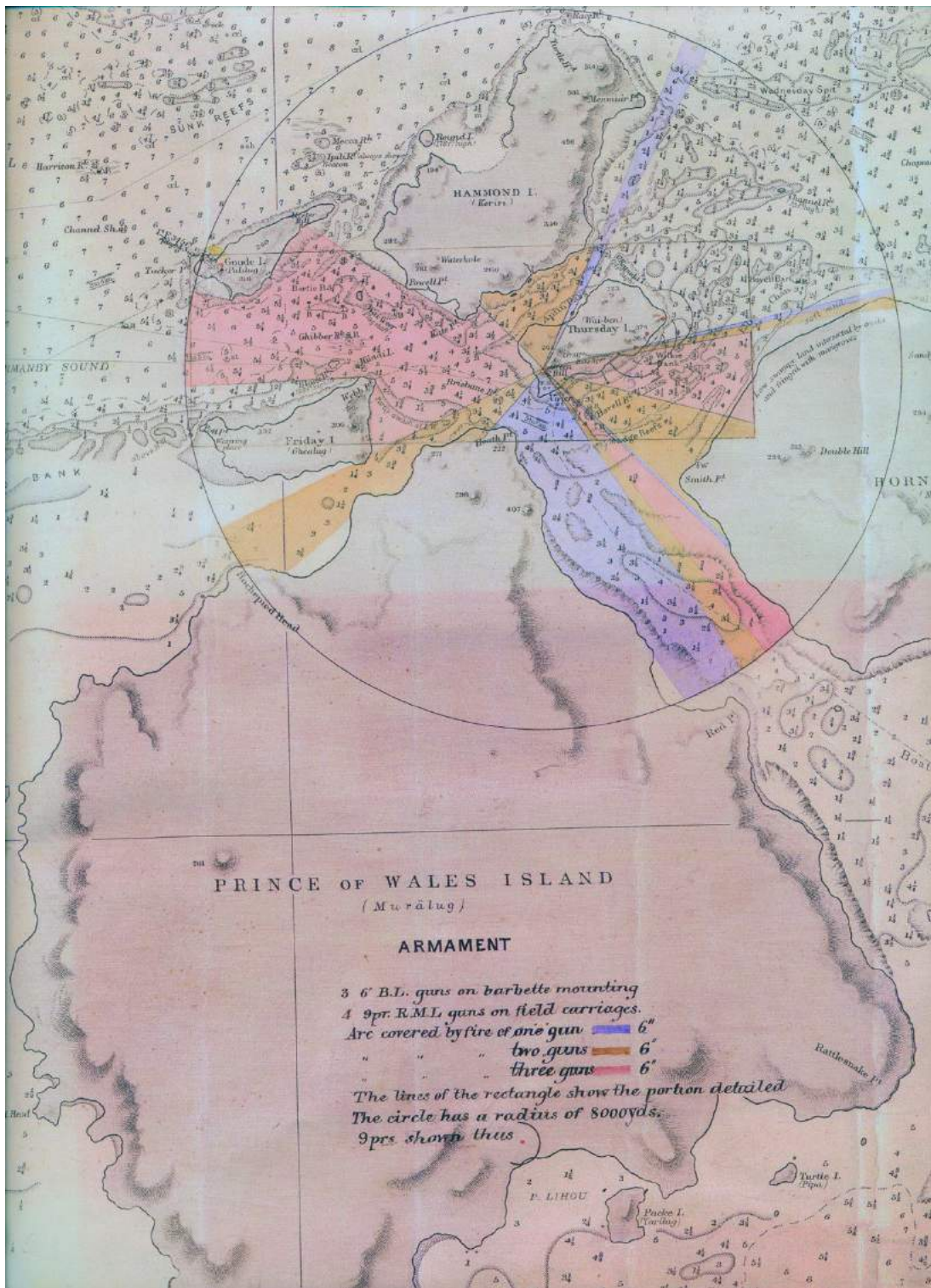


Fig 3. Range of fire plan, Green Hill Fort. July 1894 (Image courtesy of UK Public Records Office WO78/4042).

Military personnel were mainly housed at the Queen Victoria Barracks. These purpose-built structures were located some 500m northeast of the fort and linked by road. A Captain, Lieutenant and 41 men formed the initial detachment to Thursday Island in June 1893.<sup>15</sup> All were members of the Queensland Defence Forces until integration of the Colonial forces in the lead up to Federation in 1901.





Fig 4. During archaeological and conservation works as part of the major Centenary of Federation Conservation Project in 2000 an opportunistic grass fire exposed foxholes and barbed wire fencing believed to date from the establishment of Green Hill Fort. Surveyor is shown here establishing a foxhole location on the northern slopes. (Photo: Gordon Grimwade)

In 1912, a cooling plant machine room, with 'air-conditioning' ducts to the cordite store, and a powder magazine were added.

During World War 1, the main role was to control maritime traffic passing through the Torres Strait. The only shot allegedly fired in anger was when one ship failed to identify itself. A shot across the bow swiftly resolved that oversight.<sup>16</sup>

The fort remained operational until 1927. The barracks were then systematically demolished and moved to Darwin, theoretically for re-erection although in reality the materials were used for a variety of purposes. The guns were spiked and the fort abandoned.<sup>17</sup>

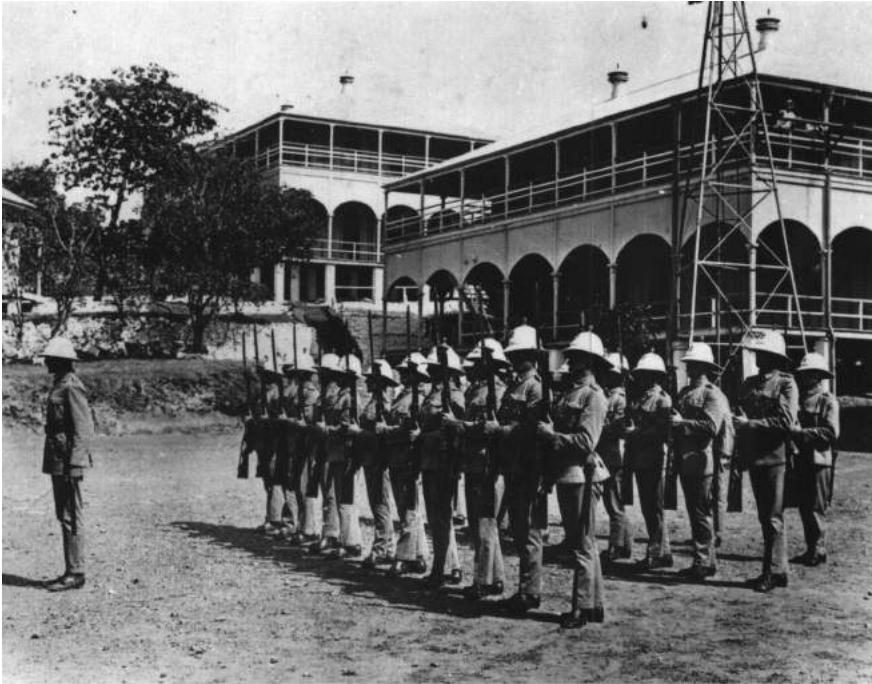


Fig 5. Parade ground at Victoria Barracks, Green Hill Fort, Thursday Island. (Photo: Private Collection).

During World War 2, Green Hill Fort was used as a Signals and Wireless Station.<sup>18</sup> The only significant modification to the fort was to fill the doorway to the artillery store with reinforced concrete: possibly for use as a water tank. Most allied forces were focused on nearby Horn Island where the airstrip and camps to accommodate several thousand military personnel were located. Although Horn Island was subjected to eight Japanese air raids none struck Thursday Island.

At some stage the trench connecting the Fort to DRF Station 1 was backfilled for most of its distance and a telecommunications facility erected over the site. Small sections of the trench are visible alongside the access track to this facility.

In 1954 the Bureau of Meteorology established a weather station at Green Hill Fort. It operated until 1993.<sup>19</sup> Modifications by that time had included various small sheds on the parados and a fibro sheeted, timber framed office over the cooling plant room. The concreted artillery store was used as an underground incinerator.

With the departure of the Bureau of Meteorology the fort passed, initially, to the care of the Torres Shire Council, although ownership remained with the Commonwealth Government. The Torres Strait Historical Society and Museum Association (TSHSMA) was given occupancy rights and the opportunity to develop an on-site museum, which opened in 1993.



Fig 6. Aerial view of Green Hill Fort during use as a weather station. Office is centre right with recording stations centre of parados. Original DRF Station 1 is on parados rear of Gun while DRF Station 2 was located to the right of the communications compound (top centre). Relic trench access is visible to right of access track from car park. Power lines were removed during conservation works in 2000. (Photo: Collection of Gordon Grimwade).

In 1998 the TSHSMA was awarded a major Centenary of Federation Grant of \$572,000 to undertake extensive archaeological, conservation and interpretation works on the site. A Queensland Government Grant of \$84,000 for displays and a third grant of \$50,000 to construct a view platform supplemented the initial project. Key tasks included the re-establishment of external drains, which had long been covered by overburden and conservation of the three six-inch guns. The artillery store was reopened and a door fitted. A viewing platform was erected on the roof of the machine room over which the weather station office had stood for many years.<sup>20</sup> The former fortification was given a further lease of life as a focal tourist attraction.<sup>21</sup>

Green Hill Fort and environs was transferred to the ownership of the Torres Strait Regional Authority circa 2003 with TSHMSA maintaining long-term use of the site for tourism purposes and the northern, lower slopes developed for residential housing. The severe maritime tropical environment has resulted in the six-inch guns and other infrastructure again suffering significant deterioration in recent years to this isolated once frontline defence facility. Whether its modest resources would have withstood a planned attack from any sustained period remains untested. Nonetheless it stands as a rare example of late colonial period military installations and possibly the least impacted of all.



Fig 7. Archaeologists excavate drains during conservation works 2001. (Photo: Gordon Grimwade)

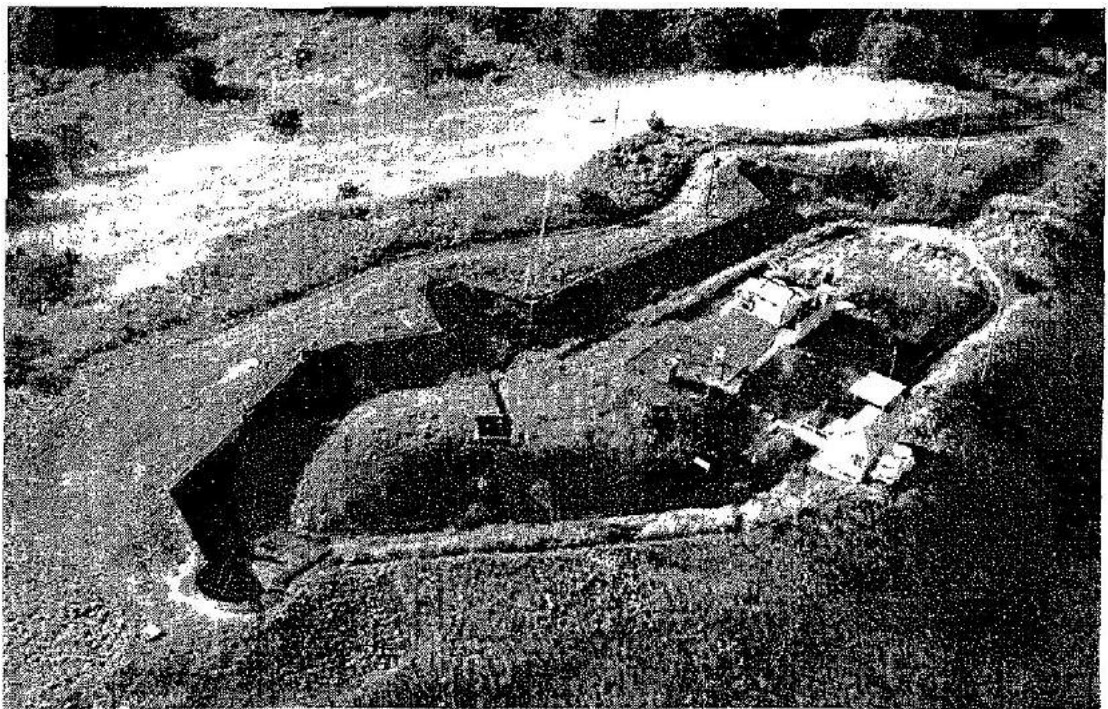


Fig 8. Green Hill Fort, Thursday Island, 1992. Photograph by Alan Earle. Reproduced in Earle, S.J., *A Question of Defence: The Story of Green Hill Fort*, Thursday Island, p. 4. This image from 1992 was accompanied by a note comparing it with Princess Royal Fort in Albany, Western Australia. The two fortifications were the result of a pre-federation intercolonial agreement that led to the two sites being constructed at the same time and financed and operated by a shared responsibilities between Britain and the colonies. The original document explained: 'An aerial photograph of the Green Hill Fort illustrates its structure and shows a very different arrangement to the Princess Royal Fortress Battery which merges with the natural features and flora of its surroundings. To some extent the Green Hill Fort resembles a traditional fortress, but without the towers and ramparts. It is embedded into the crest of the hill and its layout is clearly defined by way of broad trenches and gun pits.'

## Notes

<sup>1</sup> Colonel Sir William F. Drummond Jervois (later Major General) had over 20 years experience in military engineering and fortifications when appointed to examine Australia's military needs. He became Inspector General of Fortifications and Secretary to the United Kingdom Defence Committee before being appointed as Chief Administrator, Straits Settlements (Nicholls 1988:73). He left Singapore to take up his Australian appointment, at an annual salary of £1500, on 2 April 1877 (Q V & P 1877:813). He was variously Governor of South Australia and New Zealand.

<sup>2</sup> Peter Scratchley was born in about 1834. After a career in the Royal Engineers he was appointed Commissioner of Defence to the Colonies and instructed to leave England on 8 March 1877 to await Jervois in Sydney. His remuneration was set at £1000 per annum (Q V & P 1877:813). During his subsequent Army career Scratchley rose to the rank of Major General before retiring to take up an appointment as Governor of British New Guinea in 1884. He died at sea *en route* to Australia, in 1885.

<sup>3</sup> King, R. J. 'Green Hill Fort, Thursday Island, and the Defence of Torres Straits 1885-1925', *Journal of the Royal Australian Historical Society*, Vol 69 (2): 94-108, 1983. P.96

<sup>4</sup> Earle, S., *A Question of Defence*, Torres Strait Historical Society and Museum Association Inc., Thursday Island. 1993, p.8. King 1983:96.

<sup>5</sup> *Capricornian*, Rockhampton, Saturday 18 April 1885 p.1. (states 20) while the *Maryborough Chronicle, Wide Bay and Burnett Advertiser*, Wednesday 15 April 1885, p.2 (states 24).

<sup>6</sup> King p.18

<sup>7</sup> King p.101

<sup>8</sup> Edward Druitt 1859 – 1922, was born in Dorset, England. He was commissioned Lieutenant in the Royal Engineers (UK) in January 1878. In 1889 he was seconded to the Queensland Defence Force where he worked on the construction of Kissing Point Fort (1889 to 1891) and Green Hill Fort (1891 to 1893) with the local rank of Major. Senior officers lauded his work at the time of his return to England where he was commissioned Major in 1896, Lieutenant Colonel in 1904 and Colonel in 1909. Druitt was attached to the Board of Trade as Inspector of Railways for many years until retirement in 1909. He had married in 1889 prior to appointment to Queensland. He died, in Edinburgh, in July 1922 (*Source: Public Records Office, Kew, UK and Royal Engineer's Museum, UK*).

<sup>9</sup> George Cryle, 1855 –1926, a stonemason, migrated from Scotland in 1882. He worked with Druitt at Townsville before moving to the Green Hill Fort. At the conclusion of that project Druitt wrote 'of Cryle's 'most valuable services' and recommended that the Government should 'at some future time, when an opportunity occurs, ...reward him by further employment (Druitt 1893). In 1905 George Cryle inspected Green Hill Fort in his capacity of Inspector of Works, Department of Public Works (Cryle 1905). George Cryle went on to supervise erection of Victoria Bridge, Brisbane; Post Office, Warwick; and Custom's House, Rockhampton (Watson & McKay 1994:50).

<sup>10</sup> Colonel K. W. Maurice-Jones, 2012, *The History of Coast Artillery in the British Army*, Andrews UK Limited, p169.

<sup>11</sup> King p.98.

<sup>12</sup> *Queenslander* (Brisbane, Qld), Saturday 27 February 1892, page 432.

<sup>13</sup> Skennerton 1989:13

<sup>14</sup> Earle p.38

<sup>15</sup> Artillery staff office letter 6 June 1893

<sup>16</sup> Earle p.48

<sup>17</sup> Earle p.51

<sup>18</sup> Earle p. 52

<sup>19</sup> Earle p.53

<sup>20</sup> Grimwade, G (Ed), 'Green Hill Fort, Thursday Island. Final Report for Centenary of Federation Grant Vols 1 – 5)', (report on behalf of TSHMA to Environment Australia, Canberra ACT), 2002.

<sup>21</sup> Grimwade G and Ginn G, 'Strange Bedfellows: Green Hill Fort, Archaeology and Tourism', *Australasian Historical Archaeology Vol 20*, Sydney, Australasian Historical Archaeology Association. 2002, pp83 – 91.



# **TOWNSVILLE FORTIFICATIONS KISSING POINT AND MAGAZINE ISLAND BATTERY**



Kissing Point Fort (on right) and Jezzine Barracks

# **TOWNSVILLE FORTIFICATIONS**

## **KISSING POINT**

### **AND**

## **MAGAZINE ISLAND BATTERY**

Magazine Island Battery no longer exists but the Kissing Point Fortification is on the Queensland Heritage Register for the following values:

#### **Criterion A**

The place is important in demonstrating the evolution or pattern of Queensland's history.

Constructed in 1891 on a headland affording panoramic views of the northern and eastern approaches to Townsville harbour, the small fortification at Kissing Point evocatively demonstrates theories and practices regarding fixed points of coastal defence working in concert with naval power, which had considerable currency in the late nineteenth century after all Imperial garrisons had been withdrawn from the Australian colonies. These types of fortifications were built at various points of strategic importance - such as Lytton and Green Hill on Thursday Island, also in Queensland; Fort Scratchley and Bare Island Fort in New South Wales; Fort Queenscliff and others on Port Phillip Bay in Victoria; and Fort Glanville in South Australia - and provide important evidence of how the colonies devised and operated their own schemes of defence. The Kissing Point fortification highlights the role Townsville played as an early, important Queensland port serving a vibrant regional economy.

The low-lying land to the south and west of the fort, where Jezzine Barracks developed during World War II, was used from 1887 for regular training and from 1889 for annual encampments by north Queensland military forces, including militia, national service and cadet units, battalions mobilised during both world wars, and the 31st Battalion North Queensland Regiment, formed in 1947 as a continuation of the Kennedy Regiment. Evidence of this long pattern of military use remains extant in the parade ground occupying 7/SP211556. The five P1 huts associated with the Barracks, installed in their current location during World War II in the south-western quadrant of 5/SP211556, are important and increasingly rare icons of Australia's participation in this conflict, the outbreak of which precipitated an unparalleled and urgent defence build up on home soil that relied heavily on prefabricated structures.

#### **Criterion C**

The place has potential to yield information that will contribute to an understanding of Queensland's history.

The Kissing Point fortification and the site immediately surrounding it has experienced a significant amount of disturbance during two key phases of demolition and restoration; first in the late 1960s and then in 1979-80; however it may still provide valuable archaeological evidence of the design and construction responses made to adapt these kinds of standard battery designs to local conditions. As it belongs to a colonial system of defence that stretches along the entire east coast of Australia, the Kissing Point fortifications would benefit from and add detail to the body of evidence gleaned from these other locations.



## **Criterion D**

The place is important in demonstrating the principal characteristics of a particular class of cultural places.

The Kissing Point fortification is important in demonstrating the principal characteristics of a nineteenth century coastal battery, of which there were only four built in Queensland (three extant, one demolished), and remain a significant demonstration of the State's pre-aviation military strategy and technology. The surviving fabric provides a snapshot of this period of international conflict and the approach to coastal defence of the newly self-governing colonies of Australia. The battery at Kissing Point retains its relevant, original parts - two gun emplacements, an underground magazine, depression range finder locations, a lookout, casemate store rooms, a machine gun position, and a manning parade ground. Also remaining uncompromised is the relationship between these elements enclosed within an embanked, seaward parapet and a landward retaining wall, and the panoramic views of the wider littoral and marine landscape, which was an essential component of its defensive purpose.

The Kissing Point fortification is an important example of the work of the designer and construction supervisor, Major Edward Druitt RE, who made a significant contribution to the defence of Queensland in the late nineteenth century as a military engineer engaged on this installation, and others on Magazine and Thursday Islands. In addition the place is an important example of the strategic defence planning work of Lieutenant-Colonel PH Scratchley who implemented the ideas central to the 1877 scheme of defence for Queensland devised by Sir WFD Jervois and himself, and later extended them when he advised specific measures for the defence of Townsville including fortification of Kissing Point. These recommendations were made to the Queensland government at a time when all the Australian colonies had to defend themselves without the aid of Imperial garrisons against a number of potential threats in the Pacific region. Scratchley played a key role in this national system of coastal defence.

## **Criterion E**

The place is important because of its aesthetic significance.

Kissing Point belongs to a coastal landscape of granite outcrops, headlands and hills around Townsville, which forms a dramatic backdrop to the Great Barrier Reef Natural World Heritage Area, a vast territory of spectacular scenery esteemed internationally for its unique biological, zoological and geological qualities. The wide ranging views the fortification affords north-west to Cape Pallarenda, west to Magnetic Island and south-east over Cleveland Bay and the harbour to Mount Elliot, have been valued by generations of visitors to the site. It has also displayed striking landmark qualities for the numerous people who have appreciated the Point from other vantage points around Townsville and Cleveland Bay since early in the settlement's history.

## **Criterion G**

The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Kissing Point fortification and Jezzine Barracks (part) has strong associations for both the military and civilian communities of Townsville as a source of security and pride, evident since the earliest annual encampments held at the site in the late 1880s. These associations also are bound up in the aesthetic appeal of its location and the 45 kilometre range of views afforded across the city to

Castle Hill, and over Cleveland Bay and Rowes Bay. This community attachment to the place was evidenced by widespread concern after the site was identified for disposal in 1997 and the widely-supported public campaign that resulted in the transfer of the place to the Townsville City Council in trust in 2009, specifically for public use and benefit.

### **Criterion H**

The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The Kissing Point fortification, the Jezzine Barracks P1 huts and its parade ground taken together are significant for their almost continuous association with the Kennedy Regiment, one of Queensland's oldest military units. First formed in 1886 in Townsville; it continued with one designation or another within the Federation-era Queensland militia forces; then contributed members to the two Imperial Forces that served in World Wars I and II and who garnered battle honours during both conflicts, later operated as a battalion and briefly as a company of the Australian Army, and was headquartered at the Barracks from 1947 until 2007.

## PRE-FEDERATION COASTAL FORTIFICATIONS OF TOWNSVILLE

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## **STATEMENT OF SIGNIFICANCE**

The pre-Federation fixed coastal defence installation at Kissing Point, Townsville, constitutes a place of outstanding heritage value to the nation, to the people of Townsville and Queensland because of its significance in the course of Australia's cultural, social and economic history. The Kissing Point installation is the only coastal defence battery from the 1890s still extant in the city. It has retained its inherent historic value despite use as an artillery battery during the Second World War, the demolition of the wartime structures, partial burial during the 1960s, and the subsequent restoration of features in the 1970s. It remains an integral part of the redeveloped coastal landscape. A second colonial era fortification at Magazine Island was demolished in the 1980s to make way for harbour extensions and sugar loading facilities. Following the demolition of the Magazine Island fortification, the Kissing Point installation has assumed even more historical importance. It is linked, both in terms of construction style and history, to the other extant pre-Federation batteries at Lytton, Brisbane and at Green Hill, Thursday Island.

## **THE DEFENCE OF COLONIAL QUEENSLAND**

Prior to Federation in 1901, the early schemes for the defence of the Australian colonies reflected the values and attitudes of the wider British Empire under the reign of Queen Victoria. George Catheart Craig<sup>1</sup> was of the opinion that the rapid expansion of colonial progress was linked closely to European civilisation in the southern hemisphere and that this would blend with commerce to enhance the prosperity and progress of the British Empire. Australia viewed itself as an appendage of Britain, as the supplier of raw materials and wool and a provider of foodstuffs for the British people. The Indian Mutiny of 1857 and 1858, followed by the American Civil War from 1861 to 1865 and the rise of Russia and Japan as Pacific powers were only some of the security anxieties felt by the colonists. Behind the image of Imperial solidarity, the late 19<sup>th</sup> century was a time of nervousness, rebellion and challenge to the established social order.

In the light of these developments, coastal defence of Australian harbours were considered as part of a 'chain of ocean defence' that linked the colonies back to the Imperial heartland, Britain.<sup>2</sup> Plans for the defence of Queensland, following separation from New South Wales in 1859, were instigated by the first Governor of Queensland, Sir George Bowen. He noted, to his dismay, that Brisbane and Ipswich, the principal commercial and population centres in south-eastern Queensland, would be

entirely defenceless following withdrawal of the British military detachments in 1869. The colonial legislature in Brisbane responded to the Governor's alarm by formally approving the establishment of volunteer cavalry troops and infantry units. The Imperial government, in a despatch to Governor Bowen dated 23 June 1863 had advised that the financing of the local volunteer defence forces was placed squarely on the colonial government's shoulders. The government in London further stated that the obligations of Britain to colonial defence were discharged, in the main, by the British navy 'which must form, in both peace and war, a true Imperial contribution to the security and protection of Australia'.<sup>3</sup>

The poor state of the Queensland military defences in 1874 was noted by the Governor in a report to the Home Office:

Nothing can be more unsatisfactory than the state of the defences of this colony, in the event of any external aggression, nor do I see any means at present by which they can be improved ... Until some effective measure is passed and an adequate sum of money voted for this purpose it would be utterly hopeless to expect that even the limited number of volunteers now enrolled would become really efficient.<sup>4</sup>

The only real incentive to remaining in the volunteer forces was to accrue credits for qualifications for Land Order Certificates that were issued to men based on years of service.

In 1876, New South Wales, Victoria, South Australia and Queensland sought advice from the Imperial military experts for the establishment of a proper, professional scheme of defence. The most energetic period of planning followed presentation of a survey of defences of the various Australian colonies by Sir William Jervois and Lt Col Peter Scratchley who arrived in Brisbane on 4 August 1877 to assess the state of colonial defences in Queensland.<sup>5</sup> Jervois presented his report to the government at the end of August<sup>6</sup> and stated that Brisbane, with a population of 27,000 people, could be easily approached through Moreton Bay. As the main town in the colony this was the most vulnerable target. Townsville, with a population of only 3,000, was seen to be of limited strategic importance.<sup>7</sup>

The report recommended that an earthwork battery, rendered secure by a ditch and stockade, be considered at Lytton near the mouth of the Brisbane River to protect the main shipping route to the city. Fort Lytton, built between 1881 and 1885, was to be the first fixed coastal defence installation constructed in Queensland. The fort was constructed in the shape of a five-sided lunette, or crescent

moon, surrounded by a moat, crossed by a bridge.<sup>8</sup> The lunette would be the basic framework behind the construction of most coastal defence installations of that period.

The construction of fixed coastal defences became a standard means for the protection of important harbours, cities and other strategic points on exposed coastlines. The theory behind coastal fortification construction was clear. Fixed installations relieved the navy of purely defensive functions and gave it greater freedom for movement and aggressive offshore action. The aim was to fortify the coastal defences with guns equal to, or a match for, naval attacks. The broad purpose of fixed coastal defence was to prevent enemy attack from sea to shore, to repel successful landings, to establish a stable beachhead that could prevent the blockade of ports and harbour entrances and to serve as an additional means of protection for naval armament stores and supply depots.

These were the strategic considerations with which Jervois and Scratchley were familiar at that time. Following the investigation of colonial defences in Australia, Jervois was promoted to vice-regal status and appointed Governor of South Australia. Scratchley was retained as a consulting military engineer by several colonial governments, including Queensland, but was placed in the difficult position of trying to implement the proposals for reform at a time of political inertia and economic constraint. War hysteria swept London in 1878 when Russian forces advanced on Constantinople, the capital of Turkey, then an ally of Britain. The threat of war galvanised colonial governments in far away Australia. While the threat lasted, and it was inevitably short-lived, the volunteer engineer corps reached its greatest strength.<sup>9</sup>

New regulations concerning the establishment, regulation and reorganisation of the Queensland defence forces were formulated during this crisis period. Scratchley presented a series of progress reports from 1878 and, in 1882, a final report to the Queensland government detailing the steps necessary to complete the defence organisation of Queensland.<sup>10</sup> This final report was the first to recommend measures for the protection of Townsville that had been omitted from Jervois' report. Scratchley suggested that:

- (1) For the present it will suffice to send to Townsville the two 64-pounder rifled Guns which are available, and mount them in a convenient position so as to fire to seaward; a small magazine being built for the ammunition, and the site enclosed. On the outbreak of war, a sandbag battery could be constructed to protect the guns from the fire of hostile ships.
- (2) Two Guns of position (say 20-pounder B.L. guns), on travelling carriages, to be also provided.

(3) The Artillery Corps to be increased to a strength of eighty officers and men, under the new organisation as a Volunteer Artillery Battery. The increase of this corps has been provided for in the number of men recommended by the Military Committee for the unpaid Volunteer Force.

(4) One or more extemporised Torpedo Boats, as already suggested for Brisbane. Any new Government vessels ordered for general harbour work to be designed and fitted for use as spar[e] torpedo boats. Private steam launches, if available, to be fitted in the same manner.<sup>11</sup>

A small detachment of forty men from the Queensland Volunteer Artillery Brigade, known as No.4 Battery, had been established in Townsville on 12 June 1878 following representation to the government by A.F. Low, a local resident. But Lieutenant-Colonel Blaxland, the Commandant of the Queensland defence forces, was only able to make his first inspection in 1880 when he then selected a site for the battery on 'an elevation about 2 miles north of Ross Creek known as Kissing Point and the butts for rifle practice are to be just at the rear of the battery'.<sup>12</sup> In a subsequent report, Blaxland reported that the 'corps at Townsville could not be encamped as it had only been recently formed, and there were no means of encamping the battery without considerable expense which would not have been counterbalanced by any equivalent good result'.<sup>13</sup> This would be a regular problem for volunteer forces. Enlistment during a period of high interest or crisis was relatively easy but retaining the vigour and function of the units during long periods of peace and calm was difficult. Scratchley could find justification for basing a maximum of fifty volunteer artillery personnel at Townsville out of a total of 604 unpaid militia.<sup>14</sup> The larger force, based at Brisbane, consisted of 520 men with a permanent officer corps and paid attendance fees for other recruits. Scratchley calculated that the cost of mounting two 64-pounder guns in Townsville would be £250 but that the cost of equipment and ammunition for these 'guns of position' would be in the order of £1600.

When Scratchley left the colony in 1883 the condition of the forces had improved. By then Major G.A. French had been appointed as the new commander of the Queensland defence forces. French, a graduate of the Royal Military Academy-Woolwich, set about reordering the colonial militia by downgrading the volunteer force. At that time a militia was a force recruited by public ballot of men of a certain age from a regional area. Although they were paid a nominal attendance allowance, they could not see service outside their area of recruitment. A volunteer detachment was quite different. Not only did the volunteers provide their own uniforms, they elected their own officers, framed their own regulations of service and largely operated independently from each other. While they were unpaid, the advantage of being in the volunteers was that one was then exempt from being called for service in the militia.

The colonial legislature, under the guidance of the Premier and Chief Secretary, Sir Samuel Griffith, passed the Queensland *Defence Act 1884* that established a paid militia, a small permanent military force and new orders of battle and establishments.<sup>15</sup> This legislation framed by French placed the colonial forces on a more professional basis. The principles of Australian defence, as enunciated by Jervois, remained basically unchanged until the slow loss of British naval supremacy after the First World War. Local fixed fortifications were seen as practical defensive measures that could be maintained by the small financially constrained regional communities.

## **THE DEVELOPMENT OF THE NORTHERN MILITARY DISTRICT**

The aim of the establishment of a settlement at Townsville on the banks of Ross Creek was purely commercial. In 1864, John Melton Black, a cattle property manager from Fanning Downs Station, sent his employees from Woodstock Station, in the upper Ross River valley, to investigate the establishment of a transshipment port at Cleveland Bay. This port was declared on 30 September 1865 and a flagstaff was erected at Pilot Hill from which tidal and notification signals were made to arriving vessels.<sup>16</sup>

Townsville grew and became the headquarters for the northern military district. Following the proclamation of the *Defence Act 1884*, volunteer forces in Townsville were re-invigorated and a public meeting on 11 April 1885 in the Town Hall led to the formation of local militia and artillery corps. No.4 Battery of the Queensland Volunteer Artillery Brigade, first formed in 1878, was designated the Townsville Garrison Battery, Kennedy Division of the Northern Military Division on 24 February 1885, and on 30 October 1886 the Headquarters of the 3<sup>rd</sup> Queensland (or Kennedy) Regiment was established.<sup>17</sup> By 1886 the population of Townsville was 11,400. As this comprised 7,000 men, the local militia would have been formed from a compact group of like-minded Anglo-Australian settlers.

Major French submitted the detailed report of the Defence Committee to the Chief Secretary in 1889<sup>18</sup> and in it he and his colleagues acknowledged the strategic position of the Northern Military District when they stated that the following guns were mounted in Townsville:

- 1 64 pr [pounder] Mk III
- 1 64 pr [pounder] converted (on wooden garrison carriage)



It is now proposed to mount at Townsville two 8 in[ch] B L [breech-loading] guns 14 tons at Kissing Point and a 6 inch B L at Magazine Isd. [Island], and there would probably be one fire boat the *Palumah* [sic] there to assist in the defence and other armed barges manned by the naval Brigade.

The installation of guns at Kissing Point and Magazine Island would not be without problems. Replacement parts were often required due to 'unequally tempered material' and components had to be sent back to Britain to be tested at the Woolwich armoury.<sup>19</sup>

Cleveland Bay was the focus of military assessment. French wrote in his report:

At Cleveland Bay the cable from Cape Pallarenda to the [West Point] Quarantine Station on Magnetic Isd [Island] runs right across the anchorage in very shallow water and could easily be cut, if not defended, which could only be done by an armed vessel

There was obvious pressure on the establishment of fixed defences in north Queensland for he stated:

The towns liable to bombardment are Thursday Isd [Island], Cooktown, Port Douglas, Cairns, Townsville and Bowen. The [town] buildings being chiefly constructed of wood could easily be destroyed by fire ...

The defences of Townsville were necessary to protect the harbour and the hulks, anchored in Platypus Channel, that held 800 tons of coal. These were without any armed protection. French also recommended that strategic policy be coordinated for the protection of gold bullion held in Charters Towers, Ravenswood and Townsville.

French divided the European male population of Queensland into four classes aged between 18 and 60 who would be liable for military service. The first class comprised unmarried men or widowers aged between 18 and 30 without dependents; the second class were men aged between 30 and 45, again unmarried or widowers without children; the third class comprised married men or widowers aged between 18 and 45 with children, and the fourth class all remaining men from 45 to 60. In 1889 he estimated that the first class consisted of 50,000 men. The report contains detailed listings of the numbers, tonnages and locations of suitable support vessels, numbers of infantry, volunteer militia, police and ambulance officers, armaments, size and location of ammunition stores and powder magazines and general estimates of food supplies. The report provided the colonial government with a complete survey of the state of defence preparedness at a time of perceived external threats.<sup>20</sup>

The colonial government appointed Major Edward Druitt as Engineer Staff Officer and Major effective from 27 May 1889.<sup>21</sup> Druitt, who trained at the Royal Engineers submarine miners depot at Gosport near Portsmouth in England, was to be instrumental in designing and supervising the construction of the coastal fortifications of Lytton,<sup>22</sup> Magazine Island,<sup>23</sup> Kissing Point<sup>24</sup> and Green Hill Fort (Thursday Island)<sup>25</sup> between 1889 and his departure from the colonies in 1893.<sup>26</sup>

In 1889 Major-General James Bevan Edwards was appointed to inspect and report on the condition of the various colonial defence forces with a view to their eventual amalgamation. Rather than emphasise fixed coastal fortification, Edwards argued for mobility of forces and for active offence rather than passive defence. At a crucial time in the preparation for the construction of the Magazine Island and Kissing Point batteries this strategy ran counter to the concepts proposed by Jervois and Scratchley. Edwards felt that the Great Barrier Reef could be regarded as a natural defence feature that would inhibit the movement of large warships along the northern Queensland coast. For this reason, the northern ports need only rely on naval protection supplemented by floating defences such as torpedo boats that would be cheaper and more effective to maintain than fixed defences.<sup>27</sup> The Edwards report has been called a landmark in 'Colonial defence reorganisation' but at the time it did not go unchallenged.<sup>28</sup>

Voluntary service was popular at the turn of the century and the Townsville encampment of 1890 was a busy social event. The *Townsville Herald* of 17 June devoted three full pages reporting in minute detail on the comings and goings of the various units and their associates. Troops from Charters Towers arrived by train while the corps from Cairns, Bowen and Mackay arrived by sea. The official Queensland naval vessel, *Gayundah*, arrived as part of the show. At various stages, the camp held 650 men living in tents pitched on Norman Park and Queen's Park. Colonel French arrived and arrogantly proclaimed that 'No enemy would, of course, land in the teeth of battery' (*Townsville Herald* 17 June 1890). But the entire northern and southern coasts above and below Townsville were open and unprotected. When the battery site was examined by French and his officers the artillery unit had to haul their guns from Magazine Island to Kissing Point for training. Not everything was proceeding to plan.

## THE CONSTRUCTION OF THE MAGAZINE ISLAND BATTERY

Prior to 1891, Magazine Island was variously known as Redcliff Island, Darling Island and Inch Gordon. In 1870, an explosives magazine of local granite was constructed on the island. The explosives store had a floor area of 18 feet by 14 feet and walls 10 feet high, together with an iron roof and hardwood floor and an entrance door of copper-sheeted cedar.<sup>29</sup> After this, the island became identified as Magazine Island. (Figure 1)



Figure 1. Photograph of Magazine Island from Pilot Station hill c. 1870 showing magazine building on lower slopes. (John Oxley Library; Lawrence, Brown, McPhee and Slaughter 2006, 62, Fig 2)

Due to an increase in port traffic, the Queensland Harbours and Rivers Department agreed to improve the harbour entrance after the early 1870s. The project to develop an outer harbour between two stone breakwaters began by linking Ross Island—South Townsville—with Magazine Island, commencing from the base of Flagstaff, or Pilot Hill. William D. Nisbet, engineer for the Department, reported in 1877 that the construction of the eastern breakwater was proceeding satisfactorily 'there being abundance of rock, of the hardest description, on Magazine Island'.<sup>30</sup> A map of the proposed railway line linking Ross Island to the eastern breakwater was included in a report on a planned bridge across Ross Creek.<sup>31</sup> (Figure 2) This map shows the relative positions of both the powder magazine and a workshop located near the foreshore as well as the Pilot Station and other buildings on Ross Island. By the time construction commenced on the fortifications at Magazine Island and Kissing Point in 1890, Townsville had established itself as the viable, commercial centre of the north. As the port grew, and new reclaimed areas were developed behind the breakwater, Magazine Island became isolated in a sea of industry.

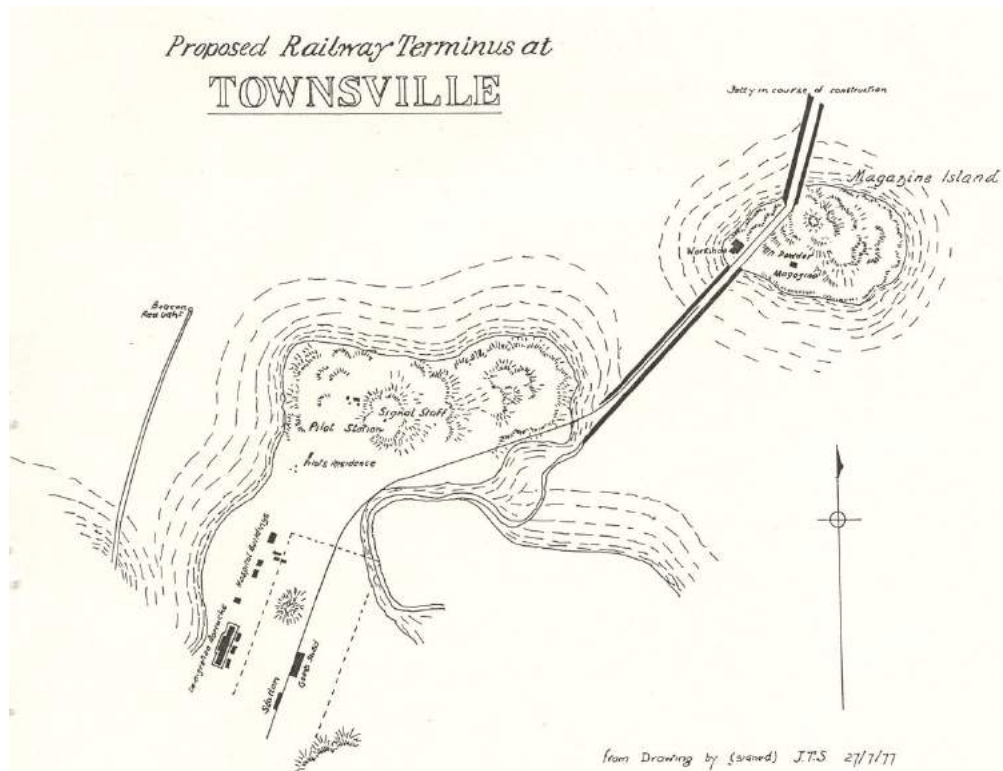


Figure 2. Copy of plan of proposed railway terminus and line to eastern breakwater showing powder magazine and workshop on Magazine Island, 1877. (Bridge over Ross Creek: return on order by Legislative Assembly, Queensland. Votes & Proceedings, 1877,1, 648-653; Lawrence, Brown, McPhee and Slaughter 2006, 64, Fig 3)

The *Townsville Herald* reported:

Major Druitt R.E. arrived by the Aramac on Thursday morning to direct the commencement of fortifications at Kissing Point and Magazine Island, on which £20,000 are to be spent. At present, however, only £6,500 of that sum is available, and £5,000 will be expended on Magazine Island, and £1,500 on Kissing Point. The fortifications will be constructed by day labor [labour], and the men employed will be under the control of a foreman, who came up by the Aramac, and who will act under the direction of Mr A. McMillan, Government Foreman of Works. The two 6in[ch] Armstrong breach loaders on the jetty are for the Magazine Island battery, but the carriages have still to arrive from South. Heavier and more expensive guns will be obtained for the Kissing Point battery. Today Major Druitt, accompanied by Major Haldane and Mr G.F. Elliott, Resident Engineer for Harbours and Rivers, will visit Magazine Hill to settle how much of that now considerably reduced island will be left for Defence Force purposes.<sup>32</sup>

Already problems were surfacing. As it was necessary to quarry even more stone for use in the eastern breakwater, Elliott decided to blast down more stone before the Defence Forces could take possession. Major Druitt was delayed by the necessity to receive permission for fort construction from the government in Brisbane.<sup>33</sup> This delay extended construction by a further twelve months.

While the breakwater grew in importance, the battery designed to defend it was being carted away. The future of Magazine Island was precarious as early as 1891.

While these further delays occurred, construction of the Kissing Point battery continued. In June 1891, the *Townsville Herald* was finally able to print:

A good start has been made at the Defence Force fortifications on Magazine Island. The operations are in charge of Major Druitt, Mr Cryle acting as foreman of works. The work on Kissing Point is now almost finished.<sup>34</sup>

From this point on progress was rapid. In August 1891 a local newspaper announced proudly:

The battery at Kissing Point is ready for its two guns (two 6in B.L., 5 tons, on barbette mountings). The racers are already fixed. With the exception of iron palisading and some small fittings not yet received, this battery is completed. Magazine Island Battery: This could not be commenced until the middle of May, as blasting operations to obtain stone for the eastern breakwater were still going on. The guns and carriages are on the spot. The armament consists of two 6in B.L. 4 ton guns, converted from muzzle-loaders on iron carriages, fitted with Elswick compressor plates. Major Druitt anticipates that the guns will be mounted early next year.<sup>35</sup>

On 30 September 1891, the newspaper reported that the Townsville Garrison Battery had reached its full complement of one Captain, one Lieutenant, two Sergeants, one Corporal, one Bugler and twenty-one Privates: a total Garrison force of twenty-seven men. The fortifications at Magazine Island and Kissing Point and their establishments were now in place for the defence of Townsville.

### **The Magazine Island Fortifications**

The Magazine Island fortifications, built by day labour under the supervision of George Cryle, cost £2,000. Druitt, as engineering officer in charge of works drew the original plans. (Figure 3) The fort record book states:

This battery is built in Latitude 19° 15'30" South. Longitude 146° 49'54" East of Greenwich. It is situated on an abrupt point almost an Island close to the inner Harbour and to the east of it. The ground rises steeply on all sides the three seaward sides are almost vertical owing to the large cutting made into the rocky face from which the breakwater was built. The Wharf Line of the Queensland Northern Railway passes at the foot of the hill on the western side.<sup>36</sup>

The fort record book stated that the principal object of the Magazine Island emplacements was to protect the shipping coming in and out of Townsville harbour from hostile attack. A secondary object was to protect the commercial centre of the town expanding along both shores of Ross Creek behind

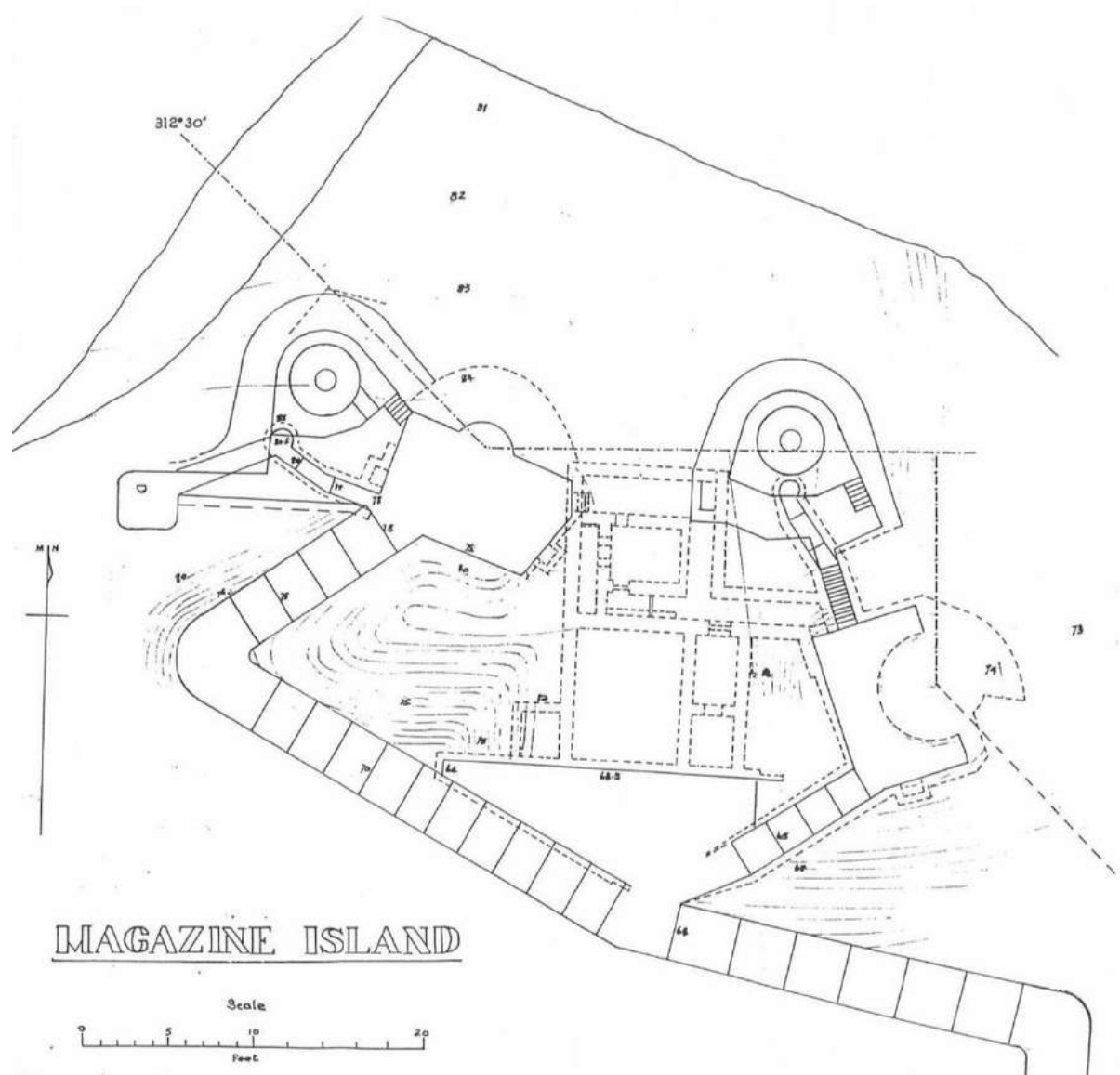


Figure 3. Plan of Magazine Island fixed, coastal, defence installations, c 1891, showing surface and underground constructions. (Commonwealth and Pre-Federation records. Fort record book, Kissing Point, Townsville and Magazine Island, Townsville. AWM1, 12/5. Australian War Memorial, Canberra, 1890-1903. Commonwealth and Pre-Federation records. Fort record book, Magazine Island, Townsville. AWM1, 12/6. Australian War Memorial, Canberra, 1902; Lawrence, Brown, McPhee and Slaughter 2006, 65, Fig 4)

the fortifications. (Figure 4) Barracks, located within the fort enclosure between the magazine and the railway line, were less than satisfactory. Early in the construction of the fort the record book noted:

Omitting the Casemate which is now used as an Artillery Store as it was hardly suitable for men to live in during the hot season, the following Barrack accommodation [sic] exists:

Barrack Room	20' x 15' x 11'
Kitchen	10' x 15' x 11'
Bath house	10' x 8' x [illegible but probably 11']

The buildings are of wood roofed with galvanized corrugated iron built on brick stumps. A verandah runs the full length of the Barrack building on the North Side. This building is estimated to accomodate [sic] 12 men and 1 N.C.O. in case of emergency.<sup>37</sup>



Figure 5  
Magazine Hill (middle distance) from eastern breakwater wharves. Adelaide Steamship Co Ltd shed in foreground, c.1902-04. (John Oxley Library)

Figure 4. Magazine hill from the eastern breakwater wharves, c 1902-1904. (John Oxley Library; Lawrence, Brown, McPhee and Slaughter 2006, 66, Fig 5)

The poor location of the barracks in a treeless open compound, in a dry, hot northern climate, added to the discomfort of the garrison. While camping ground was available at the foot of the hill on the southern side of Magazine Hill and at the top of the hill on the south-eastern side, little room existed within the compound for tents. The water supply for the men in the fort consisted of one tap in the barracks building; one tap, one shower and one bath in the bathhouse and one tap at the front of the casemate for the fort. Twenty years later, a defence report indicated that only four men could realistically occupy the barracks with any degree of comfort at any one time.<sup>38</sup> Improvements and repairs to this infrastructure were undertaken in 1904 and 1909.<sup>39</sup>

The magazine was built into the rock in the rear of the casemate and constructed of brick facing with a cement and concrete arched roof. The fort originally contained two 6-inch breech loading (B.L.) 80 pounder guns on traversing slides but these were later relocated:

A change took place in the months June to August 1896, when the two (2) 6 inch 80pr. B.L. Guns were dismounted and removed; one being sent to Brisbane and mounted on the Victoria Barrack Square and the other mounted in Townsville at the Armoury below the Supreme Court for drill purposes only.<sup>40</sup>

In December 1900, two 4.7-inch guns that had been ordered from England arrived as replacements. Between November/December 1901 and March 1902 the old emplacements of the 80 pound 6-inch guns were removed. New emplacements for the two 4.7-inch quick firing (Q.F) guns were then built, and a lift for the transport of ammunition, from the underground magazine to the gun on the right flank of the battery, was constructed. Other structural changes made at this time included the replacement of the conspicuous ventilators with new casemate ventilators.<sup>41</sup> These alterations were undertaken at a cost of £1,300. The work was carried out by local tradesmen under the supervision of Captain Cohen of the Royal Australian Artillery.<sup>42</sup> Given that the original guns were removed in 1896 and the reconstruction works not completed until 1902, the battery was lacking any effective artillery for nearly six years. Following reconstruction of the gun emplacements the ordnance of the fort consisted of two 4.7-inch Q.F. Mark IV guns, numbered 794 and 795, and one ten-barrel Nordenfelt machine gun, number 188. Recesses in the concrete walls of the emplacements were designed to contain eight boxes of cartridges, each of 48 rounds, and 78 rounds of shell. The height of the axis of the trunnions of both guns was 91.80 feet above mean sea level.<sup>43</sup> The pedestal for the Nordenfelt machine gun was erected on the left flank of the Battery in a small concrete emplacement about 6 feet in diameter with 4 foot walls that were 12 inches thick. A Mark 1A direction range finder was installed in an emplacement measuring 10 feet by 9 feet and situated on the left flank of the Battery. The direction range finder was connected to the number A 4.7-inch gun by means of a passage through the parapet,<sup>44</sup> and, in July 1907, a Mark II direction range finder was received and installed.

The railway line running from the eastern breakwater into the town along the causeway was an important part of the defensive structure of the harbour and port. It was recorded that:

The wharf line of Railway runs immediately at the foot of the hill on which this Battery is built. Thus affording an easy means of transporting stores &c. from ships or steamers lying alongside the Eastern Breakwater wharves. The lines run right down the wharves so that goods can be hoisted straight out of the hold and put into the railway trucks without further handling. There is a loading bank on a siding within 50 yards of the entrance gate to this Battery connected to this wharf line. This line connects with the Queensland Northern railway which runs to Charters Towers, Hughenden, Winton &c.<sup>45</sup>

Coastal shipping was the principal means of transportation for both people and goods to and from the northern and southern ports at that time. The Great Northern Railway linking Townsville with Charters Towers, then Ravenswood and Hughenden, had been completed in 1887. This east/west



rail line was in use long before the North Coast line connecting Townsville with Brisbane was completed in 1924.

### **The Fate of Magazine Island**

Between 1912 and 1919 the Townsville Harbour Board initiated correspondence with the Secretary of the Commonwealth Department of Defence in Melbourne concerning the fate of Magazine Island. The site was subsequently examined by the Commonwealth government surveyor and permission was sought for the expansion of the eastern breakwater using stone obtained from the quarry on the seaward side of the island. The Clerk of the Townsville Harbour Board wrote to the Commonwealth Defence authorities:

This quarry I am to explain is the only place in close proximity to the proposed work, where suitable material may be procured, and it is understood that sufficient [quarry stone] could be obtained therefrom without interfering with the suitability of the fort for drill purposes.<sup>46</sup>

Between 1913 and 1919, the Townsville Harbour Board made regular requests to the Commonwealth Department of Defence to obtain rock from the site. Part of the hill was transferred to the harbour board in 1917 but the whole site was leased to the board for quarry purposes in 1919.<sup>47</sup>

In May 1919 the Secretary of the Defence Department reported to the Home and Territories Department that the Commandant of the First Military District in Brisbane had made a number of relevant comments concerning the strategic value of Magazine Island. The Commandant wrote:

1. When the property [Magazine Island] was taken over by the Commonwealth its value was from a defensive point of view. The principal improvements were emplacements, two 4.7 guns and a wooden building giving sleeping and living accommodation for about 4 men [not the thirteen as originally anticipated in 1891].
2. ....
3. Guns [the two 4.7 inch guns obtained in 1900] have been removed - The emplacements are of practically no value, and the value of materials for removal would probably be less than £200.
4. Practically no further quarrying can take place without interference with the emplacements.
5. The site is of no further value for Military purposes.
6. Recommended that the property be struck off Defence Charge: This will leave the site free for disposal as the Commonwealth may desire.<sup>48</sup>

Subsequently the Townsville Harbour Board was granted a lease by the Department of Defence over all defence reserves for a fee of £52 per annum.<sup>49</sup> On 23 November 1927 the Harbour Board was offered the property, fee simple, for the sum of £1,500. As the total value of the reserve property was calculated at £7,110 the value of the fortification structures, as rock and fill, was £5,610. A clear, well-marked plan showing the position of Magazine Island, the eastern breakwater and the on-going reclamations traced from a Townsville Harbour Board report of 1925 highlights the isolation of the fort, and the encroaching quarrying activities.<sup>50</sup> When the completed transfer of property was made in March 1928 for the sum of £1,500 the purchase price was 'the price at which it was taken over as a fortification at the time of Federation'.<sup>51</sup> Magazine Island was sold off for scrap.

In 1928 both the Shell Company of Australia and the Vacuum Oil Company were granted leases for the construction of oil storage tanks on sections of reclamation near Magazine Hill. The Harbour Board began further levelling and excavation of the hill at the expense of these companies. In 1929, when the first oil was discharged into the completed storage tanks, only part of the original battery complex remained.<sup>52</sup> A map included in the Townsville Harbour Board annual report for the period 1933/35 shows the leased areas occupied by the two oil companies as well as the quarry lease surrounding the remains of the fortifications. An aerial photograph, dated possibly to 1966, shows the fortification emplacements and buildings on the remaining parts of the island, isolated and surrounded by encroaching industrial development, but still in relatively good condition. (Figure 5) The former barracks building was at that time occupied by a caretaker.



Figure 5. Aerial photograph of harbour installations showing reclamation works and expansion of oil storage facilities, 1966. (Townsville Port Authority; Lawrence, Brown, McPhee and Slaughter 2006, 69, Fig 7)

Researchers from the History Department, James Cook University, made a photographic record of the remaining fort structures in January 1983 and the Townsville Harbour Board also commissioned local photographer Arch Fraley to document the remains of Magazine Hill.<sup>53</sup> The collection of negatives, documenting further demolition work on Magazine Hill in 1983/84, prior to its complete demolition in 1984/85, is a valuable record of the existence of Magazine Island fort.<sup>54</sup> The site is now part of the industrial landscape of the port precinct. In October 1982 the *Townsville Daily Bulletin* published an article entitled 'An old city landmark remembered' that declared:

There were also a couple of artillery guns mounted on top of the hill for defence purposes during the town's early development... Sometimes the military, or whoever was in charge, fired practice shots at moving buoys out on the horizon. They were towed by an old coal-burning tug.<sup>55</sup>

Magazine Island battery was outdated almost as soon as it was completed. It seems fitting that its guns were never fired in anger.

### **THE CONSTRUCTION OF THE KISSING POINT BATTERY**

Kissing Point was originally known as Red Cliffs Point but as Darling Point and Darling Island were located at the south-eastern end of the beach locals renamed it Kissing Point.<sup>56</sup> A town plan from the 1870s showed that the town, in those early days of expansion, circled the base of Castle Hill. Kissing Point, Magazine Island and the Pilot Station Hill are all clearly identified.<sup>57</sup> Though both were proposed at the same time, the fortifications on Kissing Point were completed prior to the construction of the Magazine Island Battery. The continuing need to quarry granite from Magazine Hill for the construction of the eastern breakwater sealed the fate of the hill and the location of Kissing Point away from the harbour played a major part in its preservation.

The residential land at North Ward, facing Cleveland Bay, was laid out in the 1870s.<sup>58</sup> At that stage the reserve at Kissing Point had not been gazetted, and a substantial portion of the land near Kissing Point headland was low and swampy and faced onto the mangroves bordering Rowes Bay, then known as Rose Bay. Around this time the town council allocated eighty-four acres of land as reserve. Twenty-five acres behind Kissing Point were given to the Grammar School and the reserve to the seaward side of this land, including the rocky promontory, was allocated as defence reserve.<sup>59</sup> The presence of military forces in Townsville dates from first European settlement.

In 1885 the Grammar School exchanged their twenty-five acres with the council for land at the northern end of the public gardens, now called Queen's Park. The council named the undeveloped reserve Norman Park which was assumed to have been 'annexed by the Defence Department'.<sup>60</sup> The Titles Office in Townsville records that the reserve of twenty-five acres three roods was purchased in December 1909 by the Defence Department for £1,541 and prior to purchase it was leasehold land. The area of approximately twelve acres at the Kissing Point promontory, which included the Battery, was also leasehold land. A small area of about one acre was later made over to the council. At present this area is the site of the Strand Pool. The remaining eleven acres one rood and seventeen and a half perches of freehold land, used by the defence forces as a parade ground, were also acquired by the Defence Department.

In the years prior to 1885 the volunteer defence forces had trained near Cluden, south of Townsville, but this land was far from suitable as it was swampy, a considerable distance from the town and had no readily available drinking water. In 1888 the annual army encampment was held at the Queen's Park reserve. This proved unsatisfactory as the men were required to pitch their tents along Warburton Street and they complained that 'the traffic along [the street] at night and in the early morning disturbed the men, and the horses'.<sup>61</sup> On the suggestion of Major Haldane, a staff officer with the volunteers, it was proposed that the annual camp be held on the ten acres of defence reserve at Kissing Point.

In 1889 it was reported:

the Government have [sic] decided to grant the area including the salt pans at the back of Kissing Point for Defence Force purposes, and tenders are called for the construction of a dam and sluice valve at Kissing Point, it being the intention of the authorities interested in the matter to stop the tide from flooding these flats.<sup>62</sup>

The clearing and draining of the scrub-covered, swampy ground behind Kissing Point was undertaken under the supervision of Haldane. The military authorities called for tenders for the construction of earthworks that included a dam across the creek flowing into Rowes Bay, a roadway on top of the dam which formed the continuation of Bishop Street and construction of embankments along Eyre Street. These earthworks detailed in the newspaper were designed to block the flow of the tide onto the reserve and enable it to be drained and leached by fresh water during the summer wet season.<sup>63</sup> Progress was not always satisfactory. Lack of attention and bureaucratic inertia concerning defence matters were blamed on Colonel French whom the local

newspapers accused of being antagonistic to the needs of the isolated and insecure north. In the following year, the *Townsville Herald* reported, with much feeling, the sight of the guns lying neglected on South Townsville:

Where is this plan for the defence of Townsville which was being prepared by the Engineer officer [Druitt] in July last [1889]? Why has the local permanent establishment been left below its proper strength and unofficered, and why-oh! why!-does Colonel FRENCH permit those monuments to his neglect of the North, the unmounted guns on the Eastern breakwater, to lie there buried in grass, with Ross Island goats browsing peacefully around them, like models for a fancy picture of the millennium? <sup>64</sup>

### **The Kissing Point Fortifications**

The people of Townsville were later appeased. The *Townsville Herald* of 17 June 1891 reported that the Kissing Point constructions, under the charge of Major Druitt and Mr Cryle, were nearly completed and by August 1891 were ready for the mounting of the two 6-inch B.L. 5 tons guns.<sup>65</sup> The Commandant of the Queensland defence forces reported to the Legislative Assembly on 22 July 1891 that the battery was ready to accept its guns and the establishment was operational, with the exception of some small fittings and iron palisading.<sup>66</sup> The original plans for the battery drawn by Druitt and dated 23 January 1890<sup>67</sup> show that the battery was designed with two 6-inch gun emplacements, and underground magazine storage placed between the guns and casemate storage rooms located to the west of the guns near the entrance roadway and gate. (Figure 6) Other features placed in the battery compound are two machine gun emplacements and the lookout and direction range finder locations.

The original fort record book, compiled between September and November 1900, is dated January 1901.<sup>68</sup> It states that the general object of the coastal defence installations was for 'the protection of shipping in the harbour and the repulse of any attack by vessels of a hostile power'. The fort at Kissing Point was specifically designed to protect the north-western approaches to the harbour. The record book noted that the Kissing Point fort, located at latitude 19°16'55"S and longitude 146°48'24"E, was constructed on a granitic promontory about two miles northwest of the main Townsville harbour and 108 feet above mean sea level. Construction was completed in June 1891 at a cost of £3,500. The two 6-inch guns were mounted under the direction of Captain H.C.W. Hamilton. The site was chosen for its field of fire as well as the inaccessibility of the battery from the seaward side where the only points of access were blocked with barbed wire entanglements.

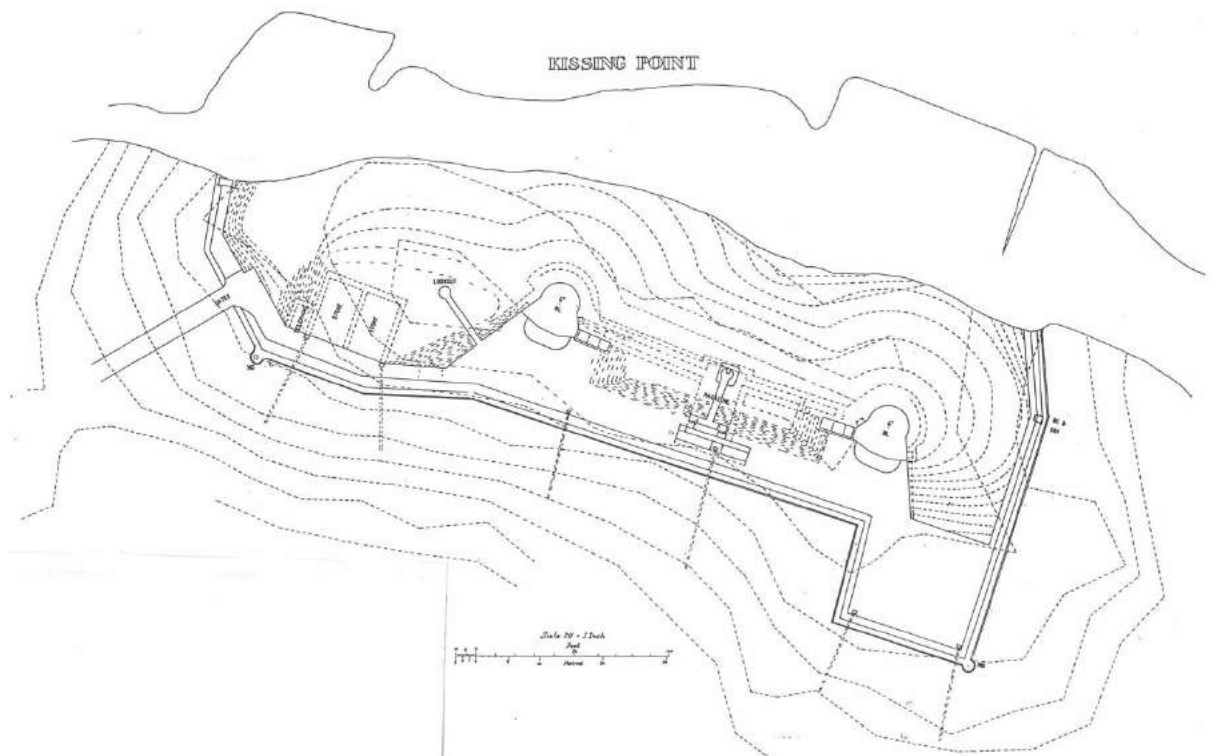


Figure 6. Plan of Kissing Point fixed coastal defence installations. Copy of original plan drawn by Major Druitt, 23 January 1890. (KPA 654 (1); Lawrence, Brown, McPhee and Slaughter 2006, 72, Fig 9)

The barracks, sergeants' quarters and officers' quarters were located below the hill to the southwest side of the installations. The ordnance consisted of two 6-inch B.L. Mark V guns, two 64 pounder guns on the left of the larger guns, and two 0.45-inch Nordenfelt machine guns. A group of five soldiers in their parade uniforms photographed with one of the Nordenfelt machine guns is labelled Kennedy Regiment (Kissing Point) 1886-1900.<sup>69</sup> (Figure 7) The magazines were built into the parapet



Figure 7. Five soldiers, Kennedy Regiment, with Nordenfeld machine gun (KPA 494d; Lawrence, Brown, McPhee and Slaughter 2006, 74, Fig 10)

between the two 6-inch guns and were connected to the gun emplacements by underground corridors. The casemate was also built into the parapet to the left of the main guns. The parapets on the seaward side were deliberately built up to a great thickness with earth and stone as protection for the guns.<sup>70</sup> An iron palisade, 10 feet high, surrounded the battery on the landward side.

The two casemates, constructed of brick and concrete, were contained 'in the front parapet; the superior slope of which gives them an earth head cover of some 5 or 6 feet'.<sup>71</sup> These underground rooms were designed as general supply stores, but by 1900 were largely used for artillery and shell stores. Adjoining the casemate was a small telephone communication room. In 1900 the casemate was fitted with air funnels and wind sails for ventilation as it was considered unfit for occupation by troops. These casements had been built to a standard design without adaptation for location and climate. Both number one and number two casemate stores measured 28 feet in length, 18 feet in width and 10 feet in height to the centre of the curved, arched ceiling and 6 feet 2 inches in height at the walls. The telephone room measured 12 feet in length, 10 feet in width and 8 feet 9 inches in height to the centre of the arched roof. The magazine of the battery was situated midway between the two main gun emplacements. Entrance to the magazine, from the compound, was by a flight of stairs on either side of the entrance door well. The entrance led into the lobby, the magazine passage, the shell store, ammunition lockers and the main magazine. From the shell store two passages led off to the guns.<sup>72</sup>

The barracks, with a detached kitchen, as well as a separate bathhouse and recreation room/canteen, were located on the landward side of the fort. The barracks building was designed to accommodate twenty-five men in a room 40 feet by 30 feet by 11 feet. The barracks had a front verandah that measured six feet wide and 40 feet long. The record book noted that the recreation room, which measured 31 feet by 16 feet by 11 feet, could also be used to house fifteen additional men.<sup>73</sup> The sergeants' room, not illustrated in the record book, was capable of housing either four N.C.Os or, what was considered to be their equivalent, eight ordinary soldiers. The sergeants' accommodation consisted of a front room, two back rooms or bedrooms, a detached kitchen, and a front verandah. The officers' quarters, designed to accommodate four officers, or six N.C.Os or, according to the rules of rank and status, twelve enlisted men, contained seven rooms, a kitchen, bathroom and passage, with a verandah all around. All these buildings were made of wood, raised on piles, with roofs of galvanised iron: the standard Queensland timber and iron building style of

the period. Each building had its own water supplied from tanks attached to the building. Additional accommodation could also be obtained in nearby private housing or in tents located on Norman Park. The cleared, level ground behind the fortification clearly provided a more accessible training and deployment site than the rocky and exposed Magazine Island.

It was estimated that in the mobilisation phase the battery at Kissing Point would require five officers and sixty-five men, the battery at Magazine Island would require three officers and forty-seven men. In the second phase of defence, under conditions of complete manning, Kissing Point battery would be manned by five officers and sixty-five men — with one horse. Magazine Island would be manned by three officers and forty-seven men — and two horses.<sup>74</sup> The schedule of manning, in detail, indicated that at Kissing Point, one officer acted as Battery Commander and Sub-Commander, three men were the commander's orderlies and trumpeter, one N.C.O. and two men were used as signallers and telephone operators, and one N.C.O. and two men were employed on the depression range finders. In addition, three men acted as permanent fort staff while one officer, one N.C.O. and nine men were deployed on ammunition supply detail. 'A' gun, a 6-inch B.L. on barbette mountings, was manned by an officer, four N.C.Os, and thirteen men. The second, or 'B' gun, a 64 pr R.M.L. garrison carriage, was also manned by an officer, four N.C.Os, and thirteen men. In addition, one N.C.O. and two men operated the 0.45-inch and the 1-inch machine guns. Two N.C.Os and four men were stationed as relief crew for the two 4.7 Q.F. guns 'when they arrive'.

While the large 6-inch guns on Magazine Island were withdrawn from commission between June and August 1896 and replaced in November 1901 by 4.7-inch Q.F. guns, the 6-inch guns at Kissing Point were retained. Following the inspection of the record book in April 1904, the details of the armaments at Kissing Point were listed as: two B.L. 6-inch 5 ton EOC Mark V guns ('A' group), two Nordenfelt 0.45-inch machine guns located on the left flank rear parapet, covering the approach, and, on the left of the fort, the 'B' group consisted of one R.M.L. 64 pounder Mark 3 and one R.M.L. 64 pounder 71 cwt (hundredweight) converted gun as well as two R.M.L. 9 pounder Mark 2 guns. All the R.M.L. guns were labelled as obsolete.<sup>75</sup>

### **The fixed coastal defences of Townsville**

In his report on the Queensland Military Forces for the year 1891-92, the Commandant, Major-General John Owen, reported that the fixed coastal defences of Townsville consisted of:



[The] Kissing Point battery - Two 6 in[ch]. B.L. 5-ton guns (on barbette mountings). [and] One 10-barrelled 0.45 Nordenfelt machine gun.

[and the] Magazine Island Battery - Two 6 in. B.L. 4-ton guns, converted (on barbette carriages). [and] One 10-barrelled 0.45 Nordenfelt machine gun.

Both these batteries are now completed, and much satisfactory work has been carried out during the past year by the Permanent Force; the whole of the guns are mounted, and all have been fired to test the mountings, &c. The mountings of the two 6-inch guns at Magazine Island were furnished with compressor plates of old type. Hydraulic buffers to replace these have been now received and will be fitted within the next few months. The ammunition for the guns at the rate of 22 rounds per gun has been received and distributed in the magazines. Range instruments for these works are required, but have now been ordered, [23 July 1892]; emplacements, &c, for their mounting have already been prepared. The completion and arming of these works necessitates the keeping at Townsville of an officer's detachment of the Permanent Force to guard and keep in order the guns, small arms and stores, and to work the guns.<sup>76</sup>

In his report Owen wrote:

In this District, (beside 3 garrison Batteries for the manning the Coast Defence Works), there is a force of about 750, (which could easily be expanded to 1,000) of Mounted Infantry and Infantry.

The Infantry is organized in a Regiment of one Battalion of 5 Companies, with two detached Companies at Mackay, (200 miles from Townsville), Communication being by sea.

The Battalion is now fairly organized as such and improving.

The whole of the troops are under a District Staff Officer at Townsville.

Townsville is 700 miles from Brisbane by sea, the only mode of communication.

A Northern Camp is held annually near the Head Quarters and, if funds are available, the whole of the troops in the District exercised in the same for 8 days.

A small compact body can thus gradually be trained which, if emergencies required could be transported by sea to any required point.

There is at present no Field Artillery nor Engineer Corps formed there.<sup>77</sup>

But the regional population grew slowly. Between the censuses of 1886 and 1891 the permanent male population increased by only 500. It was also apparent that organisation and training of local units was inadequate, infrastructure poor and communications tenuous. In the forty years between Sir George Bowen's call for volunteer defence forces to be established in the newly separated Queensland, and the close of the colonial period signalled by Federation, little had changed. At the close of the colonial period, Queensland defences continued to reflect the conservative values and attitudes of an Imperial defence structure.

## The Scheme of Defence for Queensland

In 1900 a comprehensive report of the Scheme of Defence for Queensland was prepared for the Queensland Government.<sup>78</sup> This document reported on the nature and condition of defence forces and equipment, the organisation for war and on the various modes of attack to which Queensland may be subjected. Concerning fixed and floating defences the Scheme of Defence stated:

The permanent works for defence of Brisbane, Townsville, and Thursday Island, respectively are described and the armament for the same given in Table A (page 7).

The description of the defence work and the nature of the armament should, of course, be fixed with reference to the nature of attack reasonably probable. As to this the Colonial Defence Committee have reported: - 'For the purpose of dealing with the class of vessel which will alone be found in Australasia the 6-in. gun will suffice, and, by its great handiness and speed of fire, will prove more effective than the heavier natures.'

The cost of armament and emplacement rapidly rises as calibres increase, and by restricting the size of their guns in future the colonies will secure economy, efficiency, and simplicity at the same time.

The Scheme of Defence stated rather grandly that Townsville, the main port of a great pastoral and rich mining area is 'situate' [sic] on the shores of Cleveland Bay, a shallow bay with well sheltered roadstead for large ships. The town is liable to bombardment but 'is protected by defensive works mounting formidable guns of which there is no reserve'. These fixed defences were carefully described for all to read, along with the number of rounds of ammunition, the manpower available and even the methods of communication between various sections of the armed services. The Scheme of Defence even went into such detail as to describe the possible failures that could occur in time of attack. While it was admirable that the Queensland public was assured their safety was under careful consideration, it now appears strange that all defensive positions and arguments regarding military strategies would be made publicly available.

In the event of an attack on Townsville, the Scheme of Defence noted that an enemy landing near the Ross River and approaching the town from Cleveland Bay would be repelled by defence forces occupying Flagstaff Hill and by the artillery mounted at Magazine Island. The purpose of the Kissing Point Battery was to repel attack from the north. In the event of war, a depot would be established at Kissing Point on the camping grounds behind the fort and supply reserves 'of seven days' tinned meat and biscuit would be stored at each battery.<sup>79</sup> The manning schedule at Magazine Island was similar to that at the Kissing Point Battery. An officer acted as Battery Commander and Sub-Commander and two men acted as his orderlies and trumpeter. Three men operated the signals and

telephone communications and one N.C.O. [Non-Commissioned Officer] and two men were detailed on the depression range finders. Ammunition supply was staffed by two N.C.Os and six men. 'A' gun was manned by one officer, two N.C.Os and fifteen men while one N.C.O. and two men operated the machine gun. One officer, three N.C.Os and eight men were deployed as relief crew for the two 4.7 Q.F. guns. Again, to be ready 'when they arrive'.<sup>80</sup>

The Colonial Defence Committee, in a revision of coastal defences in Australia in 1906, rather dismissively remarked:

Townsville is not suitable for use as a harbour of refuge for ocean-going shipping on account of the shallowness of the entrance channel. The first requirement of a port of refuge is accessibility at all times of the tide, and this condition is not fulfilled by the inner harbour. The deep-water anchorage, being three miles from the shore, cannot be effectively protected. There are no resources of strategic importance at Townsville.<sup>81</sup>

No doubt to the dismay of the citizens and forces in Townsville, the report of the tour of inspection by Field Marshal Viscount Kitchener of Khartoum in 1911 would be even more damning. Kitchener wrote:

Under present conditions the fixed defences of Townsville are valueless, and their maintenance a waste of money, because the shallow waters of Cleveland Bay will prevent warships of any size or power approaching within a distance of 8,000 yards of the town. Nor could it be improved by a battery on Hawkings Point, Magnetic Island. The only form of attack which Townsville need fear is by landing parties from the boats of a cruiser, and the best form of defence to meet such an attack is by mobile rifle, machine, and field gun fire. Under the [Australian] Defence Act 1909, Townsville should supply its quota to the Citizen Forces, and I recommend that the necessary garrison should be provided from this quota, and that it should consist of not less than 4 Companies of Infantry with 2 Maxim guns [and] 2 15 pr field guns with detachments.<sup>82</sup>

By 1911 the era of fixed defence fortifications had passed. Kissing Point and Magazine Island fortifications were little more than 20 years old when General Ian Hamilton, on an inspection of coastal defences in Australia in 1914, remarked rather sarcastically that the nation's use of fixed defences was in inverse ratio to its confidence in its mobile forces for:

Certain subtle influences favouring fixed defence have consistently to be guarded against. Nervous voters - the old women of both sexes ... find something tangible and comforting [in] the Existence of a permanent work. Accordingly, fixed defences are always popular with the more complaisant and vote catching type of politician. Moreover, townspeople, where the works exist, regard them as adding to some extent to the importance of the place, and for material reasons they strongly resent any reduction in the scale of garrison to which they had become accustomed... Given a sufficient land force, coast defence rightly considered exists for three purposes only: -

- (1) To protect naval works and shipping of all kinds against direct attack by an enemy's naval forces.
- (2) To prevent distant bombardment.
- (3) To deny the enemy's ships the use of roadsteads at points of strategic importance.<sup>83</sup>

Certainly Edwards' ideas of a defence force based on mobile and flexible operations had taken root but it was also apparent that neither Kitchener nor Hamilton had ever lived along the vast, isolated and unprotected coasts of north Queensland.

### **Kissing Point before the Second World War**

Between 1929 and 1930 the Naval Board offered the Defence Department two 6-inch B.L. guns Mark XI on P6 mountings. The Defence Department proposed to relocate these guns to Kissing Point battery as replacement for the 6-inch B.L. guns on mark 1 mountings. The replacement guns were inspected by the officers at the Artillery School of Instruction in Sydney as they were located at Spectacle Island in the Parramatta River.<sup>84</sup> Following inspection an estimate of costs totalling £771, which included transportation and manpower required for removal and installation, was submitted to the Military Board. Documentation attached to the file<sup>85</sup> notes that after consideration of the costs of transportation, including a quote of £250 by Cummins and Campbell, a local mercantile firm, the project was abandoned in July 1930. The old 6-inch guns were finally replaced in 1936 by 4.7-inch guns.

### **Kissing Point Battery during the Second World War**

Kissing Point battery was reinforced during the Second World War. The plans drawn in 1940 contain specific details of the layout of the battery and the location of the iron palisade or perimeter fence that enclosed the fort on three sides.<sup>86</sup> The relationship between the guns, magazine, casemate and approaches was common to many small coastal defence installations. The installation was based on a generic design and followed a strategic fixed defence position that was not adapted to environmental conditions or local geographical features. The physical structure of the fortifications was virtually unaltered between the date of construction in 1891 and the start of the Second World War.

During the Second World War, a War Cabinet Minute of 3 September 1941<sup>87</sup> stated that a Defence Committee report of March 1941 had reviewed the provision of fixed defences at the defended ports of Kupang in Timor, Port Stephens in New South Wales and at Townsville. The report recommended that the existing 4.7-inch guns be retained at Townsville and not be replaced because:

the Department of the Navy was mining the Barrier Reef passages and stated further that one of the main objects of the coast defences at Townsville was to cover the inspection anchorages and that this could be reasonably well secured with the existing guns if a search-light and signal station were installed on Magnetic Island opposite the anchorage, and quite adequately secured if, in addition to the installation of such signal light and signal station, the existing 4.7 inch guns were replaced with 4 inch guns.

Further correspondence<sup>88</sup> reports that the 4.7-inch guns were retained at the Kissing Point battery where their role was close defence. The effective range of the guns was 8,000 yards with a maximum range of 9,700 yards. Although the 6-inch guns would have had an effective range of 16,000 yards and a maximum range of 17,600 yards, it was decided that the smaller guns would have been adequate for defence of a harbour the size of Townsville, the Platypus channel and west channel between Hawking Point and Cape Pallarenda.<sup>89</sup>

A photograph from the Kissing Point Archives<sup>90</sup> clearly shows the number 2 gun being made ready for firing at the annual camp held at Kissing Point between 19 March and 1 April 1940. (Figure 8)



Figure 8. Gun crew preparing 4 inch coastal gun for firing during exercises, Kissing Point, 1940. (KPA 735; Lawrence, Brown, McPhee and Slaughter 2006, 76, Fig 11)

Documentation on the back of the original photograph states that at least one 6-inch gun was replaced by this 4-inch gun which was then also removed, in late April 1940, and replaced by a 4.7-inch gun. The general tide of war in the Pacific turned following the Battle of the Coral Sea in May 1942. By 1943 the coastal defence installation at Kissing Point was no longer considered strategically important. The emphasis had shifted to anti-aircraft defence. Townsville became a major garrison town and logistics base and large areas were taken over by American and Australian forces. The 4.7-inch guns were removed and installed at Cape Pallarenda where they could be used to defend the northern approaches of the channel.

### **Kissing Point following the Second World War**

The fortifications at Kissing Point remained defence reserve land following the Second World War. They were left untouched until the mid-1960s when the gun positions that had been altered during the war were demolished and the battery filled in as the area had become the haunt of vagrants. The casemates were retained by the Army, stationed at Jezzine Barracks, and used as storerooms. In 1979, it was proposed that restoration work be undertaken by the army engineering corps to preserve what remained of Townsville's early military historical sites. The proposal to restore the battery was agreed to by the Commanders of the 3<sup>rd</sup> Task Force and the District Support Group who planned that a restored battery would serve as a military museum emphasising the role of the defence forces in North Queensland. Restoration commenced in February 1979.<sup>91</sup> (Figure 9)



Figure 9. Gun emplacement, Kissing Point, following restoration, 1979-1980. (KPA 578; Lawrence, Brown, McPhee and Slaughter 2006, 77, Fig 12)

This was a time when Townsville was once again assuming a greater military role. Lavarack Barracks had been constructed on the southern side of Ross River in the suburb of Murray. The RAAF base at Garbutt was also expanding. The social and economic influence of the military services was becoming a major source of strength behind the growth of the region. The task of restoration required the excavation and repair of both gun positions, the excavation of the magazine together with general clearing, and reconstruction work at the magazine entrance. All brickwork was sandblasted, and electrical installation and water reticulation replaced. Stone pitching was repaired, and landscaping planned.

In July 1979, the North Queensland Army Museum Committee of Management approached the Townsville Harbour Board with a request to obtain several door and lintel frames from the Magazine Island battery. Later that month, the Townsville Harbour Board granted permission for the removal of some features from Magazine Island that were then incorporated in the reconstruction. While largely hidden within the reconstruction, these remains form a tangible link between the two sites. The programme for restoration was amended to include acquisition of display cases, installation of lighting in the casemate that was to become the display area, completion of external works such as the perimeter fences and roadworks, the erection of display signs and the preparation of a brochure on the museum. The date set for the opening of the museum was 12 June 1980. A United States Military Cemetery had been established at Belgian Gardens in July 1942 to take the war dead from the New Guinea and northwest Pacific campaigns. The remains were then repatriated back to the United States at the end of the fighting in 1945. The original flagpole from the cemetery was retained and later relocated to Kissing Point hill in 1992 during the 50<sup>th</sup> anniversary celebrations to commemorate the Battle of the Coral Sea.

The recent redevelopment of the Strand foreshore incorporates a more contemporary restoration of the Kissing Point Battery. (Figure 10) Walkways have been constructed and interpretation has been improved. The North Queensland Military Museum is now located within the Jezzine Barracks site behind the battery. Despite structural changes and the requirements of restoration, the battery retains its intrinsic historical and military nature. The Kissing Point battery is a tangible piece of colonial and military heritage in Townsville and is preserved as an important part of the National Estate.



Kissing Point Fort 11 Gun east Emplacement



Kissing Point Fort 13 Gun west Emplacement

## Notes

<sup>1</sup> Craig, G.C, The Federal Defence of Australasia, George Robertson, Sydney, 1897. Page 1

<sup>2</sup> Craig, G.C, The Federal Defence of Australasia, George Robertson, Sydney, 1897. Page 5

<sup>3</sup> Pixley, N.S, 'The military defence force of Queensland', Historical Society of Queensland Journal, 4(2), 1949, 256 and Pixley, N.S, 'Queensland-100 years of defence', Royal Historical Society of Queensland Special [centenary] Journal, 6(1, 1959, 94-121.

<sup>4</sup> Johnson, D.H, Volunteers at Heart: the Queensland Defence Forces, 1860-1901, University of Queensland Press, St Lucia, 1974. Page 63-64.

<sup>5</sup> Johnson, D.H, Volunteers at Heart: the Queensland Defence Forces, 1860-1901, University of Queensland Press, St Lucia, 1974. Page 66.

<sup>6</sup> Defences: preliminary report ... Sir W.F. Drummond Jervois, Queensland. Votes & Proceedings, 1877,1, 1273-1295.

<sup>7</sup> Johnson, D.H, Volunteers at Heart: the Queensland Defence Forces, 1860-1901, University of Queensland Press, St Lucia, 1974. Page 67.

<sup>8</sup> Commonwealth and Pre-Federation records. Fort record book, Fort Lytton, Brisbane. AWM1, 12/7 and AWM1, 12/8. Australian War Memorial, Canberra, 1912-1931.



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## WARRNAMBOOL FORTIFICATIONS



## EXISTING STATEMENTS OF SIGNIFICANCE

The Warrnambool fortifications do not have separate heritage listing but are included on the **Victorian Heritage Database** under the Lady Bay Lighthouse Complex, as follows:

### **What is significant?**

The Lady Bay Lighthouse Complex was originally built in 1858-9 of basalt quarried on the Salt Water (Maribyrnong) River, Melbourne. The upper tower, chartroom, cottage and privy were originally located on Middle Island, and the lower light was formerly located on a timber tower on the beach. In 1871 the lights were moved to Flagstaff Hill as leading lights for the entry to the treacherous and shallow Warrnambool Harbour. The lower light was placed on a bluestone obelisk that had been erected there as a navigation marker in 1854. A flagstaff had been erected on the hill as early as 1853. The battery of two 80 pounder rifled, muzzle loading guns was added in 1887 as part of a general upgrade to the defences of Victoria which saw Port Phillip Bay transformed into a fortress and the nearby ports of Belfast (Port Fairy) and Portland receive a similar armament to Warrnambool. The fortifications and guns were in a derelict condition until they were restored after the complex was integrated into the Flagstaff Hill Maritime Museum in the 1970s.

### **How is it significant?**

The Lady Bay Lighthouse Complex is of historical, scientific (technological) and architectural significance to the State of Victoria.

### **Why is it significant?**

The Lady Bay Lighthouse Complex is of historical significance as a reminder of Victoria's maritime heritage and the important role played by regional ports in the process of colonial expansion. When Warrnambool was first established, in 1847, its bay was considered to provide a safe harbour. This opinion changed after shipping first began to use it and the need for navigational aids was soon realised. Lighthouses were a vital part of the maritime infrastructure of a colony that was largely dependent on shipping for its communication with the metropolis, for its migrant intake and for its trade with the other Australian colonies and the rest of the world. These lighthouses provide an excellent example of the kind of navigational aids constructed in the early years of regional expansion in Victoria.

The Lady Bay Lighthouse Complex is of historical significance for its intact battery and guns, a strong reminder of Victoria's wealth and determination to protect itself from the perceived threat of invasion in the 1880s. The remaining guns are scientifically (technologically) significant as physical reminders of a time when these weapons represented advanced design in artillery.

The Lady Bay Lighthouse Complex is of architectural significance as a fine example of Public Works Department architecture of the 1850s and 1880s. The modest but dignified and sturdy lighthouse structures are indicative of the importance of lighthouses to the communities that relied upon them to facilitate safe passage for shipping, at a time when such transport was crucial to relatively isolated towns like Warrnambool. The battery revetments and mounds and the magazine chambers are typical of this specialised form of design.

# WARRNAMBOOL FORTIFICATIONS

Elizabeth O'Callaghan  
Warrnambool & District Historical Society

Elizabeth O'Callaghan is a life member of the Warrnambool & District Historical Society and Flagstaff Hill Maritime Village and has written extensively on the history of the area. Publications include *Leading Lights; the Story of Warrnambool Lighthouses and Lighthouse Keepers* and her most recent book *Silent Lives: Women of Warrnambool and District 1840-1910*, winner of Local History Project Award at the 2018 Victorian Community History Awards.



While there were guns and emplacements established at Warrnambool from the 1860s, the Warrnambool Battery at Flagstaff Hill was operative from 1887 to 1910.<sup>1</sup>

Warrnambool was founded in 1847 as a planned port. Its residents, like those in other towns along the western Victorian coast, shared concern about their vulnerability to attack from the sea. Local volunteer militia groups were active throughout the latter half of the century, beginning with the formation of a Volunteer Rifle Corps in 1859. By 1885 the local Volunteer Corps consisted of two groups – units of the Victorian Mounted Rifles and the Second Brigade Garrison Artillery. A number of guns or cannon used for practice and defence were brought to Warrnambool in the second half of the 19<sup>th</sup> century, commencing with the arrival of a 32 pounder gun in 1867.<sup>2</sup> Some of these guns were located in the Orderly Room in Kepler Street, Warrnambool and some were placed strategically on the area known today as Cannon Hill (part of the escarpment overlooking Warrnambool Harbour that had been called Flagstaff Hill since 1854).



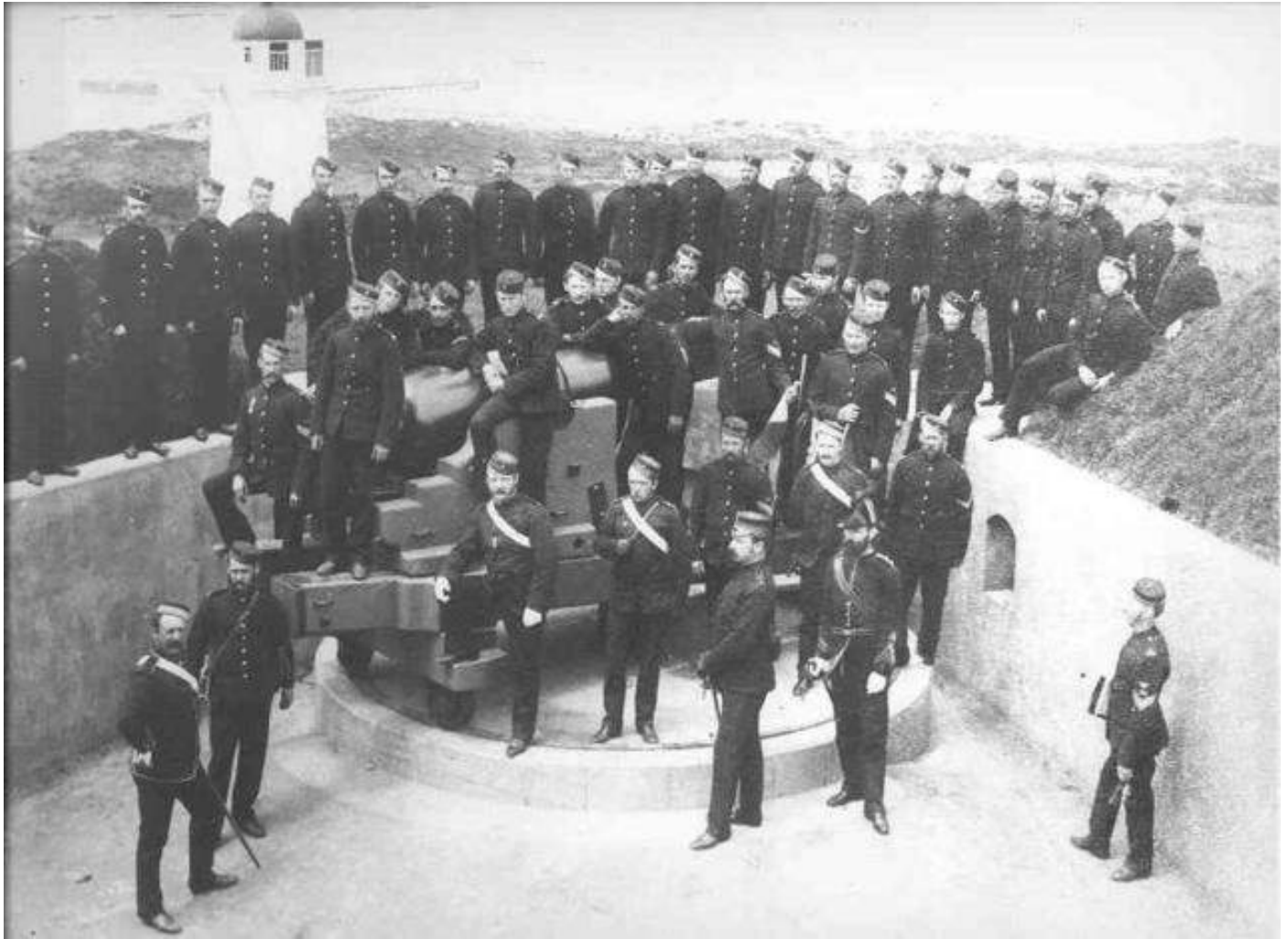
‘1884 Field Artillery Gun overlooking the sea on Cannon hill, Warrnambool’, Libraries Australia ID 49408382

The latter half of the 19<sup>th</sup> century was a time of great unrest in Europe. During the Crimean War Russia had declared war on Turkey and Britain had joined France to aid the Turks. The 1880s saw

the rise of the 'Russian Scare' with the Victorian colonists beginning to fear a Russian invasion of the coastal areas. Because of this perceived threat the Victorian Government decided to strengthen coastal defences in Victoria by building a series of forts from Port Phillip Bay to Portland. As part of this series, work on the Warrnambool fortifications, under the control of the Defence Department of the Victorian Government, commenced in July 1887. These fortifications were built slightly below the crest of the hill near the lower lighthouse at Flagstaff Hill. Two lighthouses had been operating in this area since 1871. The Upper Lighthouse, operative since 1859, was transferred from Middle Island in the Warrnambool Harbour area to Flagstaff Hill in 1871 and the Lower Lighthouse, originally a concrete marker or obelisk, was fitted with the light from the Beach Lighthouse and set up also in 1871.

The battery on Flagstaff Hill was erected on the same principle as that for the two 80 pounder guns at Queenscliff. No. 1 gun was placed several yards from the lighthouse fence and No. 2 was about 180 feet further along the hill and the intervening space for an infantry parapet. The emplacement wall around the guns was made of concrete with a bluestone foundation. There were steps leading up to the guns and to the infantry parapet. The guns were placed so as to cover the whole of Warrnambool Bay and also a portion of the land. The infantry parapet was sodded in a manner similar to that of laying bricks. There were two ammunition recesses in the wall just under the muzzle of the guns which were used for holding projectiles for immediate use. The men at the guns were under cover from any invading force coming in the direction from the sea, but the infantry men on the parapet would have to fire over the wall and then take cover. At the rear of the wall there was an asphalted path. There were two 80 pounder guns were already on Cannon Hill which were removed to the new fortification, being placed one at a time on a jinker and pulled by four horses along Merri Street to the new site.

The new battery at Flagstaff Hill was used for gunnery practice with the 80 pounders for the first time in November 1887.<sup>3</sup> There was a gunnery competition with prizes amounting to £30 offered by the Victorian Government. A target was moored out to sea at a range of about 960 yards. Major Helpman fired the first shot which proved to be a well-directed one as the shell struck the target shattering it into fragments. The concussion from the firing of the guns caused the whole of the ruby glass in the lower lighthouse to be broken.<sup>4</sup>



Battery at Flagstaff Hill Warrnambool, c 1889, Picture Victoria, ID 7809

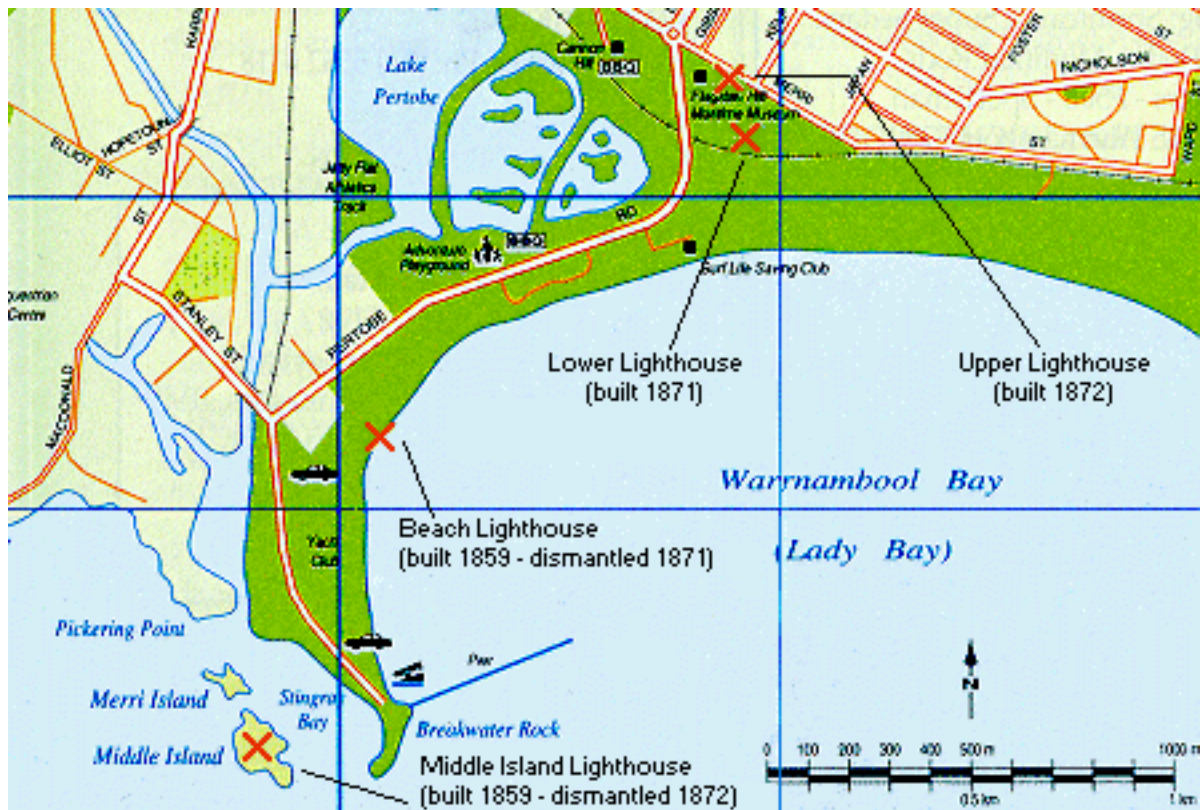
Over the ensuing years some alterations and improvements were made to the battery. In 1888 the old wooden carriages were replaced with iron ones. In 1898 a five inch breech loading gun was mounted at the fort between the two 80 pounder cannon. This had a range of 5,000 yards. In 1910 the fort was closed because of changes in Government policy. The 80 pounders, which by this time had been passed on to the ownership of the Warrnambool Town Council, were moved to Cannon Hill for display and the breech loading gun was recalled to Melbourne and sent to the Suez Canal.<sup>5</sup> After the fort closed the local Artillery Corps received four 4.7 inch naval guns which were mounted on field carriages.<sup>6</sup> These were taken to the firing range at Lake Gilleard by traction engine for practice and competition until 1914 when the local artillery ceased to exist.

Although the two lighthouses continued to be operative, the old Warrnambool Battery site remained derelict until the 1970s when the question of maintaining the precinct, especially the old unoccupied Lighthouse Keepers' Quarters, became an issue. The City Chamber of Commerce in

consultation with the Warrnambool and District Historical Society and the Warrnambool City Council formed a committee and the concept of a recreated village incorporating the historic buildings was developed and Flagstaff Hill Maritime Village came into being (officially opened in 1975). In 1973, as part of the development of the village, the two 80 pounder guns on Cannon Hill were returned to their emplacements on Flagstaff Hill. The area was heavily overgrown and preliminary clearing works were carried out prior to the transfer of the guns. At the beginning of the centenary year of the establishment of the battery a Commonwealth Employment Scheme grant was received which enabled Flagstaff Hill Maritime Village to restore the fortifications and the guns to their original condition. The guns were completely reconditioned by apprentices at the Bendigo Ordnance Factory. The fortifications were then officially re-opened by the Historical Re-Enactment Society of Australia. Today the fortifications are included within the Warrnambool Lighthouses Historical Precinct, under the control of the Warrnambool City Council, and the area is part of the historical tourist trail in the village. A local re-enactment group conducts tours and demonstrations and fires one of the guns on a regular basis as a tourist attraction.







This appears to be the only available map of the site, but the Warrnambool & District Historical Society points out that the dates are incorrect. The Lower lighthouse/obelisk was built in 1859, and light added in 1871. (Note that the Victorian Heritage Database Statement of Significance date (1854) is also incorrect.) The upper lighthouse was built in 1871. The beach lighthouse was built in 1860 and dismantled in 1869. Middle Island lighthouse was built in 1859 and dismantled 1871.

<sup>1</sup> *Warrnambool Standard*, 5 July, 1887

<sup>2</sup> *Warrnambool Examiner* 21, June, 1867

<sup>3</sup> *Standard*, 10 November 1887

<sup>4</sup> *Hamilton Spectator*, 19 November 1887; *Portland Guardian* 18 November 1887.

<sup>5</sup> *Standard*, 4 Jan 1910

<sup>6</sup> *Standard*, 24 September 1910

## **WOLLONGONG FLAGSTAFF HILL FORT AND SMITHS HILL FORT**



Smiths Hill or Wollongong Fort, RML 80 pounder gun

# WOLLONGONG

No separate study has been undertaken of the Wollongong fortifications for this thematic paper. Two small fortifications were established at Flagstaff Hill (1891) and Smith's Hill (1893).

The following is the NSW Department of Environment and Heritage listings for the Flagstaff Hill Fort and for Smith's Hill Fort. They are similar but with some localised differences.

## FLAGSTAFF HILL

### Statement of significance:

Wollongong Harbour fortifications from the late 19th Century are of significance for the State of NSW for historical, aesthetic, associative, social, scientific, and reasons of rarity and representativeness. These fortifications provide evidence of the importance of this colonial outpost and the evolution of the precinct's role in defence of the colony and of the colony's defence strategy from the 1850s to the early 20th Century. The fortifications contained in the Precinct are representative of the defence strategy and technology of the late 19th Century. They are associated with a number of significant persons who took part in their construction and ongoing use and are held in high esteem by the local residents.

## Description

### Physical description:

The fortification that can be seen today is the deep 1890 circular concrete pit - excavated into the hillside, that contained an Armstrong and Co Mark V 6 inch breech loading hydro pneumatic disappearing gun mounted in the pit. In the gun pit can be seen doorways to the tunnels that lead back into the hill to the underground cartridge and shell stores and the casemate. The gun emplacement was flanked by a depression range finder position and an observation station connected by underground passages to the Fort. There were also two machine gun posts on the southern side of

the Fort. The entrance to the underground stores is through a brick wall, that has one doorway and two window openings, set into the hillside on the southern side of the emplacement. It can be seen from the car park that originally was the battery yard. The filled in gun pit was dug out in 1999-2000. No remains of the guns survive other than the embedded metal circular track on the floor of the gun pit on which the gun carriage rotated.

**Modifications and dates:** Gun pit dug out in 1999/ 2000.

**Current use:** Not used

**Former use:** Fort

## History

**Historical notes:** The need for defence installations around Wollongong harbour had been raised as early as 1839 by Barney but went unanswered until the 1879 when in answer to calls for artillery to reinforce the newly formed rifle corps, a three-gun battery was established on the northern side of Flagstaff Hill facing the harbour approaches. The three guns were surplus 1861 vintage 68 pounder smooth bore muzzle loaders. A 12 pounder gun that was placed adjacent to the 3 guns was used as the 1 o'clock gun. In 1983, these guns were restored and placed in their present position on reconstructed carriages. An interpretive sign is located near the three guns. By the mid 1880s, calls were again renewed for the construction of permanent gun emplacements. Colonel Scratchley and Commander Howard RN reported that enemy cruisers could steam off the coast out of range of obsolete weapons and demand bunker coal from ports such as Newcastle and Wollongong in return for not bombarding them. Taking on board this advice, the government accepted that it was vital new defence plans be made. The Royal Commissions in the 1880s led to a Report on Defence in NSW being submitted to Parliament in 1887. The defence system that was agreed upon proposed fixed fortifications with adequate protection for the defenders to be built to defend the Colony's vital ports at Newcastle, Sydney Harbour and Wollongong. In the case of Wollongong, the report recommended that a defence system comprising a concealed emplacement at Flagstaff Hill and two



smaller emplacements to the north and south be built. The gun at Flagstaff Hill was to be a very large gun to be placed under cover near the summit of Flagstaff Hill and capable of being traversed so it could fire in any direction. The gun was to be powerful enough to sink any ship from Port Kembla in the south, the Five Islands seaward and Bulli to the north. In 1887 the Department of Public Works Military Works Branch called tenders for emplacements to be built at Cliff Road Smiths Hill and at Signal Hill. The Signal Hill emplacement was built in 1890 and had a battery of one Vickers Armstrong Mark V 6 inch breech loading hydro-pneumatic disappearing gun that was located in a deep circular pit. The pit was connected by tunnels to the magazine and shell stores, casemate, flanking depression range finder and observation posts, two machine gun posts and the entrance to the Battery from the Battery yard. To save costs, the Smith's Hill emplacement had a battery of two 80 pound rifled muzzle loader guns from the Royal Gun factory at Woolwich and was built in 1891-92. Signal Hill Fort - Years of Construction: 1890-1891. Designer/ Architect: NSW Department of Public Works Military Works Branch. Maker/ Builder building: James Russel & Co (Pounds) 3,200. Gun - Elswick Ordnance Co Newcastle on Tyne (Pounds) 2,675. The Wollongong Harbour fortifications were the southern-most of the colony's defences that covered the major centres of Newcastle, Sydney and Wollongong and are representative of defence strategy and technology of the late 19th century. In 1881 a three-gun battery was established on the northern side of Flagstaff Hill facing the Harbour approaches. The three guns were surplus 1861 vintage 68 pounder muzzle loaders. A 12 pounder gun that was placed adjacent to the 3 guns was used as the 1 o'clock gun. In 1983, these guns were restored and placed in their present position on reconstructed carriages. An interpretive sign is located near the three guns.

## SMITHS HILL

### Statement of significance:

Wollongong Harbour fortifications from the late 19th Century are of significance for the State of NSW for historical, aesthetic, associative, social, scientific, and reasons of rarity and representativeness. These fortifications provide evidence of the importance of this colonial outpost and the evolution of the precinct's role in defence of the colony and of the colony's defence strategy from the 1850s to the early 20th Century. The fortifications contained in the Precinct are representative of the defence strategy and technology of the late 19th Century. They are associated with a number of significant persons who took part in their construction and ongoing use and are held in high esteem by the local residents.

### Description

#### **Physical description:**

"The Smith's Hill Battery was constructed 1892-93 as a three gun emplacement. The battery consists of a wall with three semi circular parapets. The two larger northern emplacements contain the original 1872 80 pounder rifled muzzle-loader guns that had been manufactured at the Royal Gun Factory at Woolwich UK. The southern emplacement housed a 1 1/2 inch Nordenfelt quick-firing gun. Along the wall are eight recesses, for shells and cartridges and a large casemate to provide protection for the gunners. These are closed off with wooden doors. Off-set to the north, was an underground magazine that includes a cartridge store, ammunition store, workshop and lamp store. Rain water was collected from the paved areas into a series of underground overflow water tanks. A depression range finder station was located on the northern end of the site. By the early 1900s, Federal government reorganisation of the army and advances in gunnery technology led to the closure of the Smith's Hill [and Flagstaff Hill] Fort. The forts came under the control of Wollongong Council. Later the Flagstaff Hill embankments were levelled and the entrances bricked up. The Smith's Hill entrances were sealed and the site filled with boiler ash to create a park. In 1988, the site was excavated and the fort and the guns and

their mountings were restored. Interpretive signage is located at the site."

**Physical condition and/or Archaeological potential:**

Dug out and restored in 1988 after being buried since 1947.

**Date condition updated:**19 Jun 00

**Current use:** Park

**Former use:** Fort

## History

**Historical notes:**

(SHR): The need for defence installations around Wollongong harbour had been raised as early as 1839 by Barney but went unanswered until the 1879 when in answer to calls for artillery to reinforce the newly formed rifle corps, a three-gun battery was established on the northern side of Flagstaff Hill facing the harbour approaches. The three guns were surplus 1861 vintage 68 pounder smooth bore muzzle loaders. A 12 pounder gun that was placed adjacent to the 3 guns was used as the 1 o'clock gun. In 1983, these guns were restored and placed in their present position on reconstructed carriages. An interpretive sign is located near the three guns. By the mid 1880s, calls were again renewed for the construction of permanent gun emplacements. Colonel Scratchley and Commander Howard RN reported that enemy cruisers could steam off the coast out of range of obsolete weapons and demand bunker coal from ports such as Newcastle and Wollongong in return for not bombarding them. Taking on board this advice, the government accepted that it was vital new defence plans be made. The Royal Commissions in the 1880s led to a Report on Defence in NSW being submitted to Parliament in 1887. The defence system that was agreed upon proposed fixed fortifications with adequate protection for the defenders to be built to defend the Colony's vital ports at Newcastle, Sydney Harbour and Wollongong. In the case of Wollongong, the report recommended that a defence system

comprising a concealed emplacement at Flagstaff Hill and two smaller emplacements to the north and south be built. The gun at Flagstaff Hill was to be a very large gun to be placed under cover near the summit of Flagstaff Hill and capable of being traversed so it could fire in any direction. The gun was to be powerful enough to sink any ship from Port Kembla in the south, the Five Islands seaward and Bulli to the north. In 1887 the Department of Public Works Military Works Branch called tenders for emplacements to be built at Cliff Road Smiths Hill and at Signal Hill. The Signal Hill emplacement was built in 1890 and had a battery of one Vickers Armstrong Mark V 6 inch breech loading hydro-pneumatic disappearing gun that was located in a deep circular pit. The pit was connected by tunnels to the magazine and shell stores, casemate, flanking depression range finder and observation posts, two machine gun posts and the entrance to the Battery from the Battery yard. To save costs, the Smith's Hill emplacement had a battery of two 80 pound rifled muzzle loader guns from the Royal Gun factory at Woolwich and was built in 1891-92. Signal Hill Fort - Years of Construction: 1890-1891. Designer/ Architect: NSW Department of Public Works Military Works Branch. Maker/ Builder building: James Russel & Co (Pounds) 3,200. Gun - Elswick Ordnance Co Newcastle on Tyne (Pounds) 2,675. The Wollongong Harbour fortifications were the southern-most of the colony's defences that covered the major centres of Newcastle, Sydney and Wollongong and are representative of defence strategy and technology of the late 19th century. In 1881 a three-gun battery was established on the northern side of Flagstaff Hill facing the Harbour approaches. The three guns were surplus 1861 vintage 68 pounder muzzle loaders. A 12 pounder gun that was placed adjacent to the 3 guns was used as the 1 o'clock gun. In 1983, these guns were restored and placed in their present position on reconstructed carriages. An interpretive sign is located near the three guns.